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Evaluation of the Medicaid Expansion Demonstration

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Executive Summary

This is the Executive Summary of the evaluation of the Medicaid Expansion Demonstration. The Omnibus Budget Reconciliation Act of 1990 (OBRA-90) authorized the implementation of demonstration programs to expand health insurance among low-income, uninsured individuals and families who were not eligible to receive Medicaid coverage. Three States were selected to participate in the Medicaid Expansion Demonstration funded under OBRA-90 -- Maine, South Carolina, and Washington.

In 1990, 34.4 million, or 15.8 percent of non-elderly Americans were without health insurance. Nationally, the number and percent of those uninsured has increased during the course of the demonstration to 40.3 million or 17.4 percent, in 1995. This increase makes the demonstration even more relevant today than when the demonstration was conceived.

Overview of the Medicaid Expansion Demonstration

In response to growing concern over the plight of the low-income uninsured, Congress authorized the Health Care Financing Administration (HCFA) to conduct demonstrations that would allow states to extend Medicaid coverage to "certain low-income families not otherwise qualified to receive Medicaid benefits." These demonstrations would eliminate the categorical requirements of Medicaid eligibility for certain low-income individuals and families.

OBRA-90 specified that at least three (but no more than four) demonstrations should be funded, up to a maximum of $40,000,000 over a four-year period. A minimum of two-thirds of the funds were set aside for one or more statewide projects. A three-year operational phase was planned, with an additional nine months for development and three months for close-out.

HCFA issued a solicitation to States on April 30, 1991; eight States submitted applications. HCFA made awards for three demonstrations on September 30, 1991: the Maine Health Program (MHP), the South Carolina Health Access Plan (SCHAP), and Health Access Spokane (HAS) in Washington State. The demonstrations in Maine and Washington built on existing state programs for the low-income uninsured, Maine on a statewide basis, and Washington in a single county (Spokane).

Waivers. Waivers for the demonstration in Maine were approved effective October 1992. Initially, all of the adult members of the state-funded Maine Health Program were transferred to the demonstration. Open registration for new members took place in February 1993 and again in November 1993. The demonstration was terminated in April 1995 and eligible enrollees were transferred to Medicaid.

Waivers for the demonstration in South Carolina and Washington were approved in February 1993. Enrollment began in February 1993 in South Carolina and April 1993 in Washington. The South Carolina demonstration received an extension through January 31, 1997, while the Washington demonstration ended March 31, 1996.

Eligibility and Enrollment. The demonstration was targeted to individuals not receiving Medicaid, with family incomes below 150 percent of the Federal poverty level

(FPL). Maine and Washington utilized an individual enrollment model, while South Carolina had a group enrollment model, targeting small businesses (3-100 employees) in two counties. Income eligibility differed across the three sites, with Maine enrolling adults (age 20 and over) under 100 percent of FPL and providing a 12 month transition for those between 100 and 150 percent FPL. The other two states included individuals up to 150 percent of FPL. Only Maine used an asset test in addition to income.

Benefit Structure. Benefit packages could differ from the current Medicaid package, although EPSDT services could not be limited. Pregnancy services, however, would be covered under the traditional Medicaid program. According to OBRA-90, cost-sharing could not be imposed on those below 100 percent of FPL; for those between 100 and 150 percent of FPL, cost-sharing could not exceed 3 percent of the family's average gross monthly earnings. In South Carolina, employers paid a portion of the premium; employees with incomes above 100 percent of FPL could be charged up to 25 percent of the premium at the employer's discretion. Maine required cost-sharing for those above 100 percent FPL in the 12-month transition period. Washington had no cost-sharing of any type.

Provider Relations. OBRA-90 encouraged States to utilize managed care or coordinated care models, where feasible. Each program involved a managed care component to varying degrees. Washington relied on capitated contracts with managed care organizations (MCOs) to provide most services. South Carolina established a primary care case management (PCCM) program, representing the State's first venture into Medicaid managed care. Maine initiated a PCCM program on a pilot basis in two counties only a few months before the program ended. Provider reimbursement in Maine and South Carolina generally was based on Medicaid payment levels, with an additional monthly case management fee to PCCM providers.

Employer Participation. States were encouraged to incorporate employer participation in providing coverage for employees and their dependents. Employer involvement was the underpinning of the South Carolina demonstration, with the insurance product marketed directly to employers. In Maine, the State had the option to require employees to accept employer-based coverage if it was offered, and if the state deemed it to be a cost-effective alternative. However, due to administrative complexity both for the State and employers, few enrolled through this option. Washington had planned to develop an employer component, with direct marketing to employers, but that never came to fruition.

Goals of the Evaluation

The similarities and differences in characteristics of the three Medicaid Expansion Demonstration programs provide a rich opportunity for evaluating the acceptability and feasibility of covering the uninsured through the Medicaid program. The three programs provide a range of features which can be compared and contrasted:

Enrollment models include individual enrollment in Maine and Washington versus group enrollment in South Carolina.

Managed care options include fully-capitated in Washington, PCCM in South Carolina, and no managed care for most of the time in Maine.

Program orientation reflects the level of association with traditional Medicaid which was high in Maine and low in South Carolina and Washington.

The evaluation addresses the performance of the demonstrations with respect to enrollment, costs and utilization, and access and satisfaction. In addition, we highlight employer experiences with the South Carolina demonstration (SCHAP). One of the challenges of conducting a multi-state evaluation is to identify the key evaluation questions that can be answered with the available data and that are relevant to policymakers. Exhibit 1 lists the basic research questions addressed in this evaluation. Ultimately, our goal is to synthesize the results of the demonstration to determine the implications for expanding insurance coverage to low-income uninsured populations in other states or nationwide.

December 4, 1997

Data Sources for the Evaluation

The evaluation involved a multifaceted approach to gather both qualitative and quantitative information. The ***case study component*** assessed the implementation of each demonstration through on-site interviews and review of program documents. The ***primary data collection component*** involved collecting survey data on insurance status, utilization, health status, access to care, and satisfaction with care for a sample of demonstration participants and selected comparison groups. Finally, the ***administrative data component*** relied on eligibility, enrollment, claims, and encounter data maintained by each State, to provide information on enrollment trends and cost and utilization patterns of demonstration participants, traditional Medicaid beneficiaries, and other enrollees in state-sponsored health insurance programs for low-income populations.

Key Accomplishments of the Medicaid Expansion Demonstration

Before proceeding with lessons learned from the demonstration, we would like to highlight three key accomplishments of the Medicaid Expansion Demonstration. First, the Medicaid Expansion Demonstration enrolled 13,610 people across the three sites. Most of the participants were uninsured at the time they joined the demonstration (or they were shifted from State-funded programs for the uninsured).

Second, there can be no question that access to care was improved by the demonstration. However, measurement of access "impacts" is complex in a non-experimental design (i.e., in the absence of randomization). Unfortunately, our study could not model the impact of *obtaining* insurance coverage, due to lack of a baseline non-enrolled population that could be followed after the demonstration was implemented. Instead, we conducted longitudinal analyses showing the impact of the *loss* of insurance coverage on access and satisfaction. The likelihood of obtaining ambulatory care, especially in a non-hospital-based setting, declined after coverage was terminated. For example, upon disenrollment from SCHAP, the likelihood of a visit in the past three months declined from 60 percent to 39 percent. Concurrently, the likelihood of experiencing unmet need substantially increased (from 18 percent to 32 percent). Satisfaction with the cost of medical care dropped precipitously, following termination of coverage. Whereas 51 percent were very satisfied with medical care costs during SCHAP, only 10 percent were very satisfied after SCHAP. Similar impacts were observed in Maine after the demonstration ended. Thus, we conclude that the demonstration improved access to care by eliminating financial barriers to care.

Exhibit 1

List of Research Questions Addressed in the Evaluation of the Medicaid Expansion Demonstration

Enrollment

- Who joined the demonstration and why?

- How successful was each State in achieving its enrollment targets?

- What administrative features contributed to each program's enrollment experience?

Utilization and Costs

- What are the trends in costs and utilization according to length of enrollment in the demonstration? Is there evidence of pent-up demand among enrollees?

- How do utilization and costs of demonstration participants compare with those of a traditional Medicaid population (South Carolina) or other privately insured group (Washington)?

Access and Satisfaction

- How do the three programs vary in the level of access and satisfaction reported by enrollees?

- What is the impact of loss of insurance coverage on access and satisfaction?

Employer Participation

- How did employers learn about the South Carolina Health Access Plan (SCHAP)?

- What kinds of employers enrolled in SCHAP and how did they differ from employers that did not join SCHAP?

- How did participating employers assess their experience with SCHAP?

- What impact did SCHAP have on the private market for small business insurance?

The third key accomplishment of the Medicaid Expansion Demonstration was the involvement of employers in the South Carolina program. SCHAP successfully enrolled eligible employees and dependents of eligible employers and provided a scaled-back package of Medicaid benefits. The program was extremely well received by employers.

Lessons Learned from the Medicaid Expansion Demonstration

Lesson 1: Administrative Complexity Should Not Be Underestimated

The three demonstration programs were more complex to administer than might have been anticipated. The three programs utilized different approaches, including piggybacking on the traditional Medicaid program in Maine, coordinating between two existing agencies in Washington, and establishing an entirely new field operation in South Carolina.

MHP built upon the existing Medicaid infrastructure and was viewed simply as another category of Medicaid eligibility. One might have expected a smooth implementation and operation as a result. However, the State encountered legislative resistance which placed the future of MHP in jeopardy, year after year, and hence distracted program staff from developing any innovations within the program. For example, Maine had planned to implement a primary care case management (PCCM) program as part of MHP to control utilization and minimize program costs. A pilot PCCM program was implemented for both Medicaid and MHP beneficiaries in two counties only a few months before MHP was terminated.

South Carolina devoted considerable resources to administering the SCHAP program, for example, through an extensive on-site effort of employer recruitment, individual enrollment, and program monitoring. Administrative expenses averaged 40 percent of total program costs, with a low of 26 percent in the final year of the program. This amounted to $58 per member per month in administrative expense. Clearly, a hallmark of the program was the level of "customer service" provided to both employers and employees. However, it would appear there were some "inefficiencies" introduced in administering the program on such a small scale in two counties, and no opportunities to reap any economies by applying the knowledge or infrastructure from the demonstration to a larger geographic area.

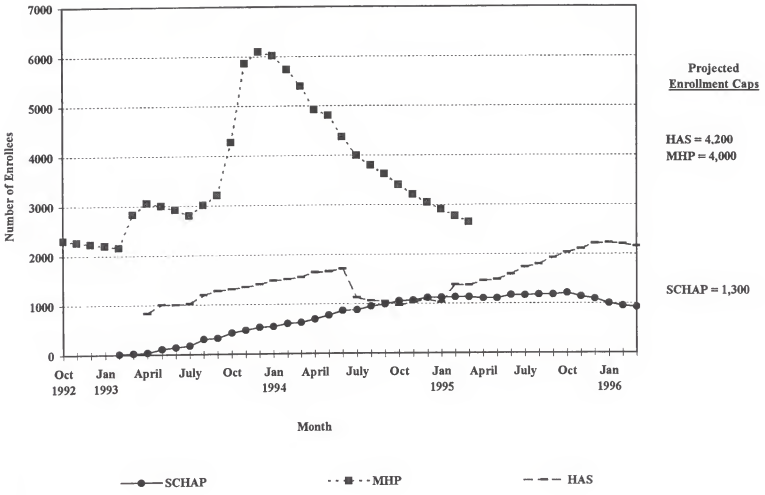
From HAS, we observed the conflicts that can occur when a program is co-administered by two state agencies with different organizational styles, philosophies, motivations, and priorities. The Medicaid agency, which conceived of HAS, maintained a client advocacy orientation, while the Health Care Authority (HCA), which was charged with day-to-day operation of HAS, had a private insurance perspective. Initially, more attention was given to "learning to speak the same language" and resolving differences in the "cultures" of administering agencies than to developing the infrastructure for eligibility determination, marketing, and education. None of the enrollment systems were automated at the time HAS was implemented. Additionally, the concept of targeted marketing was anathema to HCA staff. HCA staff also faced conflicting priorities. At the time HAS was being implemented, a State-subsidized health insurance program for low-income people, known as the Basic Health Plan (BHP), was being converted from a pilot phase to a permanent program. This meant that HCA was undergoing reorganization and expansion at the same time it was "burdened" with the additional responsibility of overseeing operations of HAS. This largely explains the low levels of enrollment of previously uninsured individuals in HAS. On the other hand, we can view HAS as a "learning experience" for other joint State initiatives between Medicaid and HCA. The introduction of BHP-Plus, a Medicaid extension for low-income children, was coordinated by HCA in July 1994. According to State Medicaid officials, this effort went much more smoothly as a result of experience gained under the HAS demonstration.

Lesson 2: Enrollment Targets were not Easily Achieved

None of the three programs easily achieved their enrollment targets (Exhibit 2). The Maine Health Program (MHP) had originally set a target of 4,000 new enrollees (plus approximately 2,000 rollovers from the State-funded MHP). Open enrollment yielded only 800 new eligibles; the remainder was identified through a review of Medicaid denials. SCHAP projected an average monthly enrollment of 1,300 members, with a first-year maximum of 1,390 at any one time; SCHAP staff expected the program to become fully subscribed very quickly. Clearly, this did not happen. Membership peaked at 1,211 in October 1995 – about 30 months into the program. Finally, HAS set a goal of 4,200 members, but after the first year, only 35 percent of this goal had been reached. These demonstrations did not meet their enrollment targets for a number of reasons. SCHAP had narrow eligibility criteria which few employers could meet. Additionally, some employers were unwilling to offer a program to their low-income employees that provided a more generous benefit than was available to higher-income workers. The salient message of SCHAP is that income-based eligibility is not attractive to employers; instead, health

Exhibit 2

Enrollment Trends for Maine, South Carolina and Washington: Medicaid Expansion Demonstration



nsurance programs need to insure the entire group, perhaps with varying levels of subsidies based on income.

The reasons for low participation in Maine and Washington stem from the lack of marketing as well as volatility in the two programs. Neither Maine nor Washington committed significant resources to marketing the programs. A large share of the initial enrollees were shifted from State-funded programs (the Maine Health Program and the Basic Health Plan) into the demonstration. Otherwise, word of mouth was the dominant mode of information about the program. Little formal outreach and marketing of the program was conducted. In Washington, program administrators were concerned that too much marketing would result in waiting lists, and did not want to turn people away.

Other factors accounting for low enrollment in Washington included a lack of local presence in the demonstration county (which was 260 miles away from the State Capitol); a lack of unified State support for the program; inadequate data systems for identifying and enrolling those who were eligible for HAS; and possible welfare stigma associated with HAS. Premature cancellation of the program was announced approximately 15 months after the program began because the State was unwilling to commit additional resources to conduct a large-scale marketing campaign. When the local media reported that a program providing "much-needed health coverage" for low-income individuals would be terminated, widespread public opposition resulted in reinstatement of the program. Ironically, enrollment climbed steadily after the media blitz denouncing the premature termination of the program. The HAS demonstration period also was marked by the "rise and fall" of health care reform in Washington State, which also served to divert attention away from the demonstration.

In Maine, program volatility also affected the program's enrollment history. The open enrollment took place at the same time the Governor was proposing to eliminate the program. Little advance notice was provided of the open enrollment period (less than 10 days). As a result, only 800 new enrollees came from the open enrollment. Instead, most of the new enrollees (about 3,000) were identified through a review of Medicaid denials for MHP eligibility. No new enrollments were admitted after December 1993 until the program ended in March 1995.

The experience of the Medicaid Expansion Demonstration demonstrates that simply offering a program to low-income, uninsured individuals, families, or employees does not ensure they will know about the program or choose to participate. Moreover, program volatility negatively affects States' willingness to market the program and individuals' willingness to join the program.

Lesson 3: Program Orientation Affected Enrollment and the Resulting Risk Pool

Two of the programs – SCHAP and HAS – pursued innovative efforts to privatize or decentralize Medicaid-like coverage, by positioning the coverage as "insurance" rather than simply "claims payment." Both programs deliberately avoided a direct association with Medicaid. In contrast, MHP was a direct extension of the Medicaid program.

The three programs provide an interesting contrast in the reasons enrollees cited for joining, which also mirror the programs' orientation (Exhibit 3). We found that enrollees in Maine were far more likely to join MHP because of a "current medical condition," reflecting

Exhibit 3

Most Important Reason for Joining the Medicaid Expansion Demonstration

	Maine Health Program	South Carolina Health Access Plan	Washington Health Access Spokane
Possible future accident or illness	36.4%[a,b]	52.8%[c]	44.9%
Current medical condition	38.6[a,b]	6.7[c]	18.9
Routine checkups	25.0[a,b]	16.6[c]	36.2
Employer provided it	N/A	23.9	N/A

NOTE: [a] refers to significant difference at the 5% level between Maine and South Carolina, [b] between Maine and Washington, and [c] between South Carolina and Washington.

the role of the Maine medical community (especially hospitals) in referring their patients to the program. The program was developed and implemented as if MHP were another category of Medicaid, and like Medicaid, enrollees perceived MHP as a way to pay medical bills when they were sick. The program was not marketed as an insurance product, and enrollees did not seem to understand that they could not re-enroll at will. Consequently many enrollees declined to complete the six-month recertification when not actively receiving treatment and lost eligibility.

SCHAP enrollees, on the other hand, were most likely to join the demonstration to protect against a "possible future accident or illness," reflecting the insurance orientation of the program. SCHAP was deliberately "de-linked" from Medicaid and marketed as an employer-based insurance product. As an employment-based program, SCHAP enrollees were in better health than those enrolled in the other two programs. (Moreover, when compared with traditional medicaid populations, SCHAP enrollees were loser cost.)

HAS, too, was disassociated from Medicaid, and was positioned as a private insurance product like the Basic Health Plan. As a result, enrollees tended to report they joined HAS to protect against future health care needs, as well to afford routine checkups, consistent with the managed care orientation of the program.

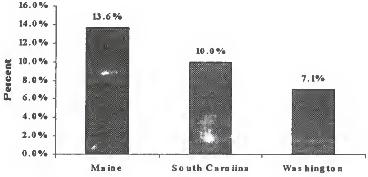
We have observed, therefore, that each program's orientation and implementation directly influences the risk profile. MHP's association with Medicaid tended to attract a sicker risk profile. However, from an insurance perspective, these risks may not be insurable if individuals enroll when they need care, and disenroll when they no longer need care. On the other hand, employment-based coverage, like SCHAP, "self-selects" those who are working and typically are healthier than those who are not working. It would appear that individual coverage through a publicly-subsidized insurance program, such as HAS, attracts a broader mix of enrollees – poor and nonpoor, employed and unemployed, and healthy and sick.

Lesson 4: Private Insurance "Crowd-Out" Was Not a Problem

A concern with any Medicaid expansion is whether individuals will drop their private insurance coverage in favor of publicly-funded or subsidized coverage. Across the three programs, no more than 15 percent of those surveyed reported having private coverage prior

Exhibit 4

Percent of Demonstration Participants with Private Insurance Coverage Prior to Joining the Medicaid Expansion Demonstration



to joining the demonstration (Exhibit 4). Many of these were likely to have been underinsured.

The highest level of private coverage was found in Maine (13.6 percent), where health status was poorest, suggesting that MHP enrollees may have dropped their private coverage to obtain richer benefits as well as to eliminate cost-sharing.

In South Carolina, where 10 percent reported private coverage prior to joining SCHAP, the employer could not have offered health insurance within the last 12 months. Those who reported prior coverage could have obtained it through a spouse or from a previous job. Interestingly, few insurance brokers in the two counties even knew SCHAP existed.

HAS enrollees had the lowest level of prior private coverage (7.1 percent). One possible explanation is that the level of marketing and outreach was so limited that most people with private coverage would not have known about HAS. Indeed, the demonstration attracted predominantly those who were uninsured or who were insured through a state-subsidized program. Most individuals enrolled in the demonstration reported that they could not afford health insurance coverage (71 percent in Maine and 46 percent in Washington) when they were employed. Very few individuals reported that they did not *want* health coverage.

The analysis, therefore, does not provide evidence that private insurance was "crowded out" by expansion of Medicaid Eligibility under the demonstration.

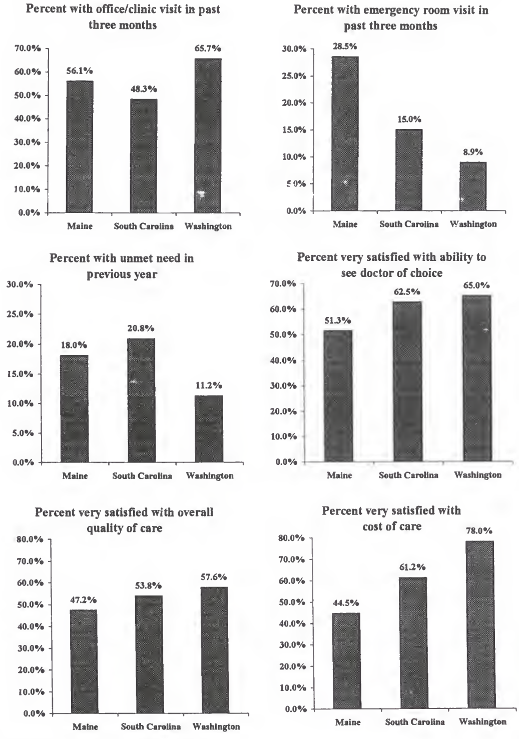
Lesson 5: Variations in Program Structure Were Associated with Variations in Access and Satisfaction

Our analysis has shown that the structure of the service delivery system can affect levels of access and satisfaction. The capitated managed care system under HAS performed relatively more favorably than the other two programs (Exhibit 5). Of particular note were the lower levels of hospital-based ambulatory care and higher levels of office-based care in Washington, relative to the other two programs. This is likely a function of the availability of a medical home in HAS, and the impact of managed care incentives. Unmet need was lowest in Washington as well, despite the capitated payment arrangement. Satisfaction also tended to be higher in the capitated system in Washington, especially in contrast to Maine.

A general insight of the Medicaid Expansion Demonstration is that managed care is acceptable to low-income populations. The results reveal a fundamental irony of Medicaid

Exhibit 5

Variations in Access and Satisfaction in the Medicare Expansion Demonstration



Percent with office/clinic visit in past three months

Percent with emergency room visit in past three months

Percent with unmet need in previous year

Percent very satisfied with ability to see doctor of choice

Percent very satisfied with overall quality of care

Percent very satisfied with cost of care

SOURCE: Medicaid Expansion Demonstration Household Survey.

managed care. Contrast, for example, the features of the HAS and MHP programs. HAS restricted access to a network of providers established by the two managed care plans. In theory, MHP offered unrestricted access to providers under a fee-for-service delivery system. In reality, however, the appearance of freedom-of-choice was just an appearance, given the unwillingness of many providers to participate in Maine's Medicaid program. Differences in the level of satisfaction with regard to provider choice seem to reflect an anomaly of Medicaid managed care – restricting freedom-of-choice through a private managed care provider network can actually expand access for Medicaid beneficiaries. Moreover, perceived quality of care is higher.

Moreover, anecdotal evidence obtained during the case study suggests that provider capacity under HAS exceeded that under traditional Medicaid fee-for-service. Some providers opted to participate through the managed care program, although they closed their practices to Medicaid fee-for-service patients.

Lesson 6: Aggressive Program Management Can Result in Under-Utilization

We surmise that the aggressive management of utilization and costs by SCHAP staff contributed to lower levels of utilization relative to enrollees in the other two states, and consequently, higher levels of unmet need reported by SCHAP enrollees (Exhibit 5). Anecdotal evidence from the case study suggests that SCHAP staff monitored and followed up on every hospitalization and emergency room visit. Additionally, according to the SCHAP Final Report, members were advised during orientation that "if they abused the program or did not follow the guidelines for obtaining treatment, they could endanger the economic stability of the program or face paying the total bill themselves." Conversely, SCHAP staff apparently portrayed the message that low expenditures could result in expansion of the program. We speculate that such messages, although well-intentioned, may have encouraged subscribers to not seek care or to delay seeking care due to concerns about losing their own coverage, or threatening others' coverage. However, this was never confirmed in the case study interviews.

Interestingly, we observed that levels of unmet need declined over time among continuous SCHAP enrollees. These findings are consistent, too, with the utilization and cost analyses, which showed an upward trend over the three years. This suggests that SCHAP staff were less vigilant in their management of utilization and costs as the SCHAP program became more established and the future of the demonstration was in less jeopardy. (Moreover, SCHAP enrollees' recall of the orientation message likely diminished over time.) Our conclusion, therefore, is that under-utilization can occur if care is "over-managed."

Lesson 7: Concerns About Pent-up Demand were Unfounded

We examined the relationship between length of enrollment and patterns of utilization and cost to determine whether there was any evidence of pent-up demand. In general, we did not find evidence of pent-up demand in our analyses. Utilization was reasonably consistent over time or tapered off gradually as length of enrollment increased. Except in one instance, we did not find unusually high levels of utilization or costs during the initial months of enrollment. The one exception was in Maine, where hospital use was highest in the first month of the program and then steadily declined. However, this is unlikely to reflect true pent-up demand, but rather, is more likely an artifact of the enrollment process. Anecdotal evidence suggests that hospitals were enrolling patients already admitted in order to get their bills paid. Our results are certainly consistent with that scenario. It seems improbable that hospital admissions could have been scheduled on such short notice.

Our analysis should be comforting to managed care plans that are considering coverage of low-income, previously uninsured populations. From a rate-setting perspective, the results imply that utilization is not extraordinarily high in the first few months of enrollment. Our analysis has not addressed the *administrative costs* associated with turnover in programs for low-income populations. The average length of enrollment was 13 to 14 months across the three demonstration programs, although substantial proportions were enrolled for six months or less (24 percent in MHP, 34 percent in SCHAP, and 33 percent in HAS). Our results suggest that enrollment turnover may have less of an adverse effect on health care costs than on administrative costs.

Lesson 8: Elimination of Cost-Sharing Stimulated Higher Levels of Utilization

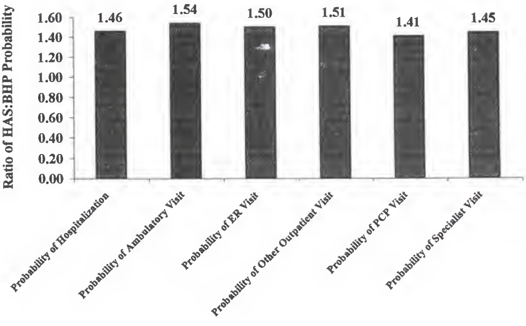
Although we found no evidence of pent-up demand, we did find that utilization patterns varied depending on the benefit structure. We compared probabilities and levels of use between two programs in Washington State, the HAS demonstration and the Basic Health Plan (BHP). BHP was a publicly-subsidized insurance program for low-income individuals and families , which required a monthly premium and copayments at point-of-service, and had a 12-month pre-existing condition clause. The maximum premium payment for BHP was $600 per year for individuals and $1,200 for families at the time HAS began.

Additionally, the BHP copayments were not inconsequential for a low-income population: $8 to $10 per doctor visit (excluding preventive care), $25 to $50 per emergency room visit, and $50 to $100 per hospital stay. HAS, on the other hand, had no premiums, no copayments, and no limits on use for pre-existing conditions. BHP also excluded many benefits covered by HAS, including mental health and chemical dependency services, vision care, prescription drugs, durable medical equipment, transplants, physical therapy, and chiropractic care.

As would be expected, HAS members had a significantly higher probability of ambulatory care use than BHP members (also low-income and living in Spokane County), in the range of 50 percent higher (Exhibit 6).

Exhibit 6

Comparison of Utilization of Health Access Spokane (HAS) Versus Basic Health Plan (BHP) Enrollees



NOTE: Represents odds ratios derived from logistic regression analysis of HAS and BHP utilization..

SOURCE: Primary analysis of encounter data for HAS and BHP enrollees.

Similarly, the probability of hospitalization was 46 percent higher. It is unlikely, however, that this entire differential is due to variations in the benefit structure. Unobserved differences in health status between HAS and BHP members likely account for some (but an unknown) magnitude of the utilization differential. For example, 14 percent of HAS enrollees were in fair or poor health, compared to 9 percent of BHP enrollees in 1989. Assuming the sicker BHP enrollees opted to enroll in HAS, the actual differential may be even greater.

The lack of cost-sharing in HAS was a source of consternation within HCA (the agency responsible for day-to-day operations of HAS). They felt that HAS should institute a copayment, to instill responsibility among members in making prudent decisions about health care utilization. The absence of "demand-side" cost-sharing, they argued, resulted in overutilization.

It would appear from the utilization analyses that utilization levels differed between the two managed care organizations which served both HAS and BHP members. Enrollees in Group Health Northwest (GHNW), which was predominantly a group-model HMO, had significantly lower levels of use than those covered by Medical Services Corporation (MSC), an IPA-model. One implication is that the salaried payment arrangement among GHNW providers resulted in more effective utilization controls than the discounted fee-for-service arrangement in MSC. Thus, "supply-side" financial incentives appear to have been significant determinants of utilization as well.

Additional research is needed to model the impact of cost-sharing on utilization behavior, specifically within a low-income population. More sophisticated risk adjustment is required to control for potential selection effects of sicker people into high-option plans.

Lesson 9: The Administrative Costs of Coordinating Employer-Based and Other Coverage are High

All three programs initially had some provision for employer participation, as mandated in OBRA-90. The experience in Maine and Washington has demonstrated the complexities of developing an employer-based subsidy program (or Medicaid "buy-in").

In Maine, for example, the State screened MHP applicants for the availability of private coverage. The State paid the premium for private coverage if it was found to be "cost-effective" relative to enrolling the beneficiary in MHP. The State offered wraparound coverage for benefits covered under MHP but not offered through employer-based plans. Originally, by statute, MHP was required to pay the employer or insurer for the employee's premium share. However, most employers were unwilling to participate on this basis because of the administrative difficulty of processing premium payments on other than a payroll deduction basis. Subsequent legislation authorized MHP to reimburse enrollees directly for the premium share. Only about 2.5 percent of MHP enrollees participated through employer-based plans, mostly with direct reimbursement to employees. Thus, most employers had little or no direct involvement with MHP. This is consistent with a recent General Accounting Office study of three states, which found small enrollments and minimal cost-savings in their Health Insurance Premium Payment (HIPP) programs.

An opposite approach was planned in Washington, whereby the State intended to ask the employer of eligible HAS beneficiaries who were employed to contribute to the premium HAS paid to the two participating HMOs. Thus, the State hoped to find private employers who would subsidize HAS. The employer subsidy was never implemented because of program staff concerns about the temporary duration of HAS and the potential conflict that could be created if the employer paid for some workers but not others. Moreover, the HMOs were concerned about the potential impact on their small group and individual products. Thus, the State abandoned all plans for an employer component under HAS.

The South Carolina demonstration, in contrast, was entirely based on employer participation. Although the program was considered a broad success, the demonstration carried a steep administrative cost associated with employer recruitment and customer service. Administrative costs amounted to 40 percent of total program costs. While we would not expect such high administrative costs were the program to be administered on a statewide basis following the demonstration, the SCHAP experience nevertheless demonstrates the costliness of intensive employer outreach, eligibility determination, and program monitoring.

A key concern about coordinating employer-based and other coverage is the broader generosity of traditional Medicaid benefits. In the case of MHP, the State paid for services not covered under the private benefit package, thus increasing the administrative complexity of the subsidy program. In the future, it may be neither administratively reasonable, nor fiscally prudent, for a State to augment private coverage with more generous Medicaid benefits.

Lesson 10: Employers Were Willing to Participate in a Medicaid Expansion Program

The underpinning of the South Carolina demonstration was the provision of employer-based health insurance coverage to small businesses with a preponderance of low-income workers. The program seems to have attracted a disproportionate share of family businesses, which joined for "peace of mind."

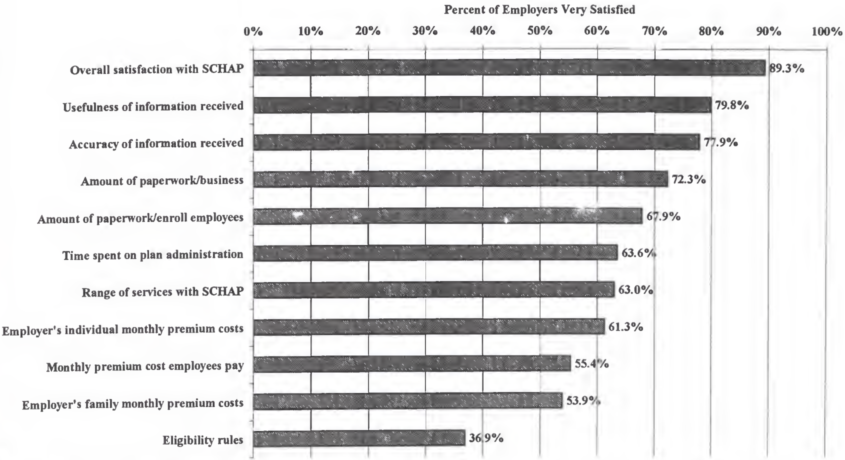
Employers who participated in SCHAP were very positive about their experience. They were strongly committed to the success of the program and wanted very much to see it continue indefinitely. They were very satisfied with the benefits, costs, and administrative aspects of SCHAP (Exhibit 7). The level of satisfaction is not surprising because of the way in which SCHAP was designed. Its premiums were much less expensive than competing premiums because they were heavily subsidized by the Federal grant. They received the Medicaid benefit package, which is quite comprehensive compared to benefits typically offered in the small group market (which are often quite limited to keep the premium low).

The level of administrative service provided by SCHAP staff was exceptional; the ratio of firms to SCHAP staff was quite low. It would be a challenge to provide the same high level of service in a program that was large enough to lower average fixed costs sufficiently to compete in the private market. However, SCHAP was designed as a public program to serve a population that is not served well by the private market, so that high administrative costs relative to commercial plans which screen their risks may be justifiable.

There was one source of dissatisfaction with SCHAP – the narrow eligibility criteria for employers and their employees. SCHAP demonstrated the inequity of covering low-income employees within a business, but not covering a firm's higher-income employees.

Exhibit 7

Employer Satisfaction with Selected Aspects of SCHAP



SOURCE: Medicaid Expansion Demonstration Employer Survey.

This made the program less attractive to employers who were unwilling to offer a more generous benefit to their low-wage workers. Provision must be made for covering workers who do not meet the stringent low-income threshold required for subsidized coverage. Based on the SCHAP experience, less restrictive eligibility criteria would be expected to increase participation, decrease administrative overhead, and improve acceptance among the general population of employers. One caveat, however, is that subsidy programs are costly and typically generate relatively low enrollments, especially if they are of a temporary duration (USGAO, 1992).

Concluding Remarks

The Medicaid Expansion Demonstration has ended and the effects seem to have been short-lived. In South Carolina and Maine, most of the demonstration participants returned to being uninsured. Most of the enrollees in the Washington demonstration transferred to the Basic Health Plan, a subsidized health insurance program, which was already in place at the time HAS began.

Nevertheless, the Medicaid Expansion Demonstration has taught us valuable lessons about the promises and challenges of creating health insurance programs for low-income people who are uninsured. This evaluation is extremely timely in light of the recent and ongoing decline in private insurance coverage.

Perhaps the most significant lesson of the Medicaid Expansion Demonstration is that the achievement of enrollment targets is not guaranteed, even if the program is free and eligibility criteria are generous. Marketing and outreach are required, and this can be an expensive and labor-intensive effort, as SCHAP has demonstrated. When multiple stakeholders are involved, as was the case with HAS, differences in the "cultures" of administering agencies can limit the commitment to marketing, and hence, the very viability of the program. Similarly, Maine's fiscal uncertainty served to dampen enthusiasm for the program and minimized the success of open enrollment.

The results clearly have shown that demonstration enrollees were better off when they were enrolled in the program than after they lost coverage, due to disenrollment (as evidenced in South Carolina) or because the program ended (as we saw in Maine). We conclude that the Medicaid Expansion Demonstration served to eliminate financial barriers to care, and thereby reduced levels of unmet need. This was achieved largely by improving access to ambulatory care, especially in non-hospital-based settings.

1

Introduction

The Omnibus Budget Reconciliation Act of 1990 (OBRA-90) authorized the implementation of demonstration programs to expand health insurance among low-income, uninsured individuals and families who were not eligible to receive Medicaid coverage. Three States were selected to participate in the Medicaid Expansion Demonstration funded under OBRA-90 -- Maine, South Carolina, and Washington.

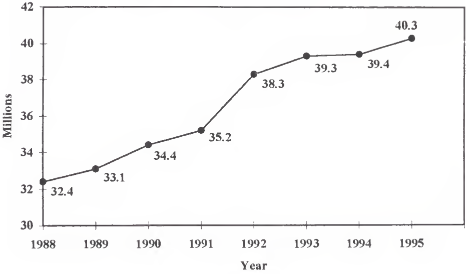
This is the Final Report of the evaluation of the Medicaid Expansion Demonstration. This report presents qualitative and quantitative results of the evaluation and discusses implications for future Federal and State initiatives for the uninsured.

This chapter discusses the context of the demonstration today, more than seven years after the authorizing legislation was passed. The Nation's uninsured rate has only increased over time, actually making the results of the demonstration even more relevant today. This chapter also describes the statutory requirements and key features of the demonstrations, and finally, the goals of the evaluation.

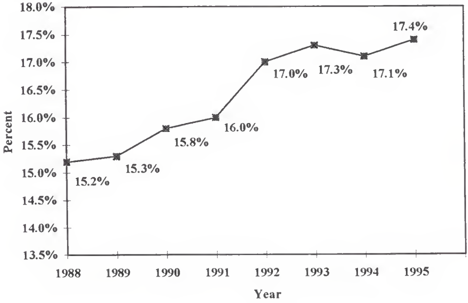
1.1 Context of the Demonstration

Because of the fragmentary nature of our Nation's health insurance system, large segments of the U.S. population have no health insurance. As shown in Figure 1-1, the number of nonelderly Americans without health insurance increased from 32.4 million in 1988

Figure 1-1



Number of Nonelderly Uninsured Americans, in Millions, 1988-1995



Percent of Nonelderly Americans Who Were Uninsured, 1988-1995

SOURCE: Employee Benefit Research Institute Analysis of the March Current Population Surveys 1989-1996.

to 40.3 million in 1995, representing a two-percentage point growth in the uninsured rate from 15.2 percent to 17.4 percent (EBRI, 1996). Additionally, spells of uninsurance appear to be lengthening; about three-fourths of the uninsured will lack coverage for at least one year, and half for more than two years (Rovner, 1996).

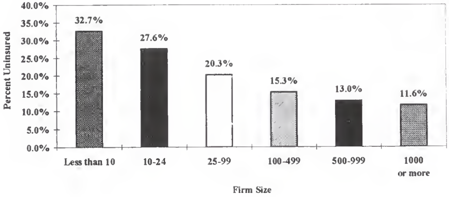
The nonelderly uninsured rate ranged from 8.6 percent in Wisconsin to 28.8 percent in New Mexico in 1995 (Alpha Center, 1997). In general, Midwestern states have the lowest uninsured rates, while Southern and Southwestern states have the highest rates. Variations in uninsured rates across states are a function of state Medicaid generosity and availability of employer-based coverage, among other factors (McCloskey, Woolwich, and Holahan, 1995).

The Medicaid program plays an important role in paying for health care for low-income populations, with 56 percent of those in poverty covered by Medicaid in 1995, up from 48 percent in 1993 (EBRI, 1996; U.S. Bureau of the Census, 1995). Recent Medicaid expansions primarily have benefitted low-income pregnant women and children (Alpha Center, 1994). Medicaid's categorical eligibility requirements typically exclude low-income single adults, childless couples, or other families not meeting the income or assets tests.

Despite an economic boom in the 1990s, having a job does not guarantee health insurance coverage. Indeed, 84 percent of the uninsured are from working families (Rowland *et al.*, 1994). Recent increases in the uninsured population are due in large measure to reductions in employer-based health coverage (from 61 percent in 1990 to 57 percent in 1994). The uninsured rate among workers varies dramatically by their income status and firm size. Only one-fourth of the working poor, compared to two-thirds of nonpoor workers, receive insurance from their employers (Seccombe and Amey, 1995). Moreover, the uninsured rate declines sharply as firm size rises (EBRI, 1996). One-in-three workers in firms with fewer than 10 workers was uninsured, compared with 15 percent or less in firms with 100 or more workers (Figure 1-2).

Figure 1-2

Percent of Nonelderly Workers Without Health Insurance By Firm Size, 1995



SOURCE: Employee Benefit Research Institute Analysis of March 1996 Current Population Survey.

The burden of being uninsured does not fall equally on all segments of the U.S. population. One-third (34 percent) of all nonelderly Hispanics and 22 percent of blacks, versus only 14 percent of whites, were uninsured in 1992 (Berk, Albers, and Schur, 1996). Even among those who are working, Hispanic workers were nearly three times as likely as white workers to lack health insurance from any source (Seccombe, Clarke, and Coward, 1994). Minority workers tend to be concentrated in small firms (under 10 employees) and in the low-wage service sector, which is less likely to offer insurance.

Why don't people have health insurance? According to a 1993 Kaiser/Commonwealth Fund survey, 59 percent said they could not afford coverage; another 22 percent cited loss of a job or lack of employer-based health benefits; 3 percent indicated ill health or prior illness as the cause; and only 7 percent were uninsured by choice (e.g., they don't believe in insurance). The remaining 9 percent cited other reasons. Thus, Rowland *et al.* (1994) conclude: "For most uninsured Americans, lack of insurance is an economic, not a personal, choice."

The uninsured are most likely to go without needed care or to delay seeking care. Thirty-four percent of the uninsured, but only 9 percent of insured people, reported needing but not receiving care. More strikingly, 71 percent of the uninsured and only 23 percent of insured people postponed receiving care due to financial reasons (Davis *et al.*, 1995).

Failure of the private insurance and public assistance systems to cover significant portions of the nonelderly population has resulted in a proliferation of proposals for addressing the problems of the uninsured (Butler and Kilbreth, 1991). In response to growing concern over the plight of the low-income uninsured, Congress authorized the Health Care Financing Administration (HCFA) to conduct demonstrations that would allow states to extend Medicaid coverage to "certain low-income families not otherwise qualified to receive Medicaid benefits." These demonstrations would eliminate the categorical requirements of Medicaid eligibility for certain low-income individuals and families.

1.2 Overview of the Demonstration

The key objective of the Medicaid Expansion Demonstration, as indicated in OBRA-90, was to support projects that "can reasonably be expected to improve access to health insurance coverage for the uninsured". OBRA-90 specified that at least three (but no more than four) demonstrations should be funded, up to a maximum of $40,000,000 over a four-year period. A minimum of two-thirds of the funds were set aside for one or more statewide projects. A three-year operational phase was planned, with an additional nine months for development and three months for close-out. The demonstration was targeted to individuals not receiving Medicaid, with family incomes below 150 percent of the Federal poverty level (FPL). Cost-sharing could not be imposed on those below 100 percent of FPL; for those between 100 and 150 percent of FPL, cost-sharing could not exceed 3 percent of the family's average gross monthly earnings. Benefit packages could differ from the current Medicaid package, although EPSDT services could not be limited. Pregnancy services, however, would be covered under the traditional Medicaid program. States were encouraged to incorporate employer participation in providing coverage for employees and their dependents, as well as to utilize managed care or coordinated care models.

HCFA issued a solicitation to States on April 30, 1991; eight States submitted applications. HCFA made awards for three demonstrations on September 30, 1991: the Maine Health Program (MHP), the South Carolina Health Access Plan (SCHAP), and Health Access Spokane (HAS) in Washington State. The demonstrations in Maine and Washington built on existing state programs for the low-income uninsured, Maine on a statewide basis, and Washington in a single county (Spokane).

Waivers for the demonstration in Maine were approved effective October 1992. Initially, all of the adult members of the state-funded Maine Health Program were transferred to the demonstration. Open registration for new members took place in February 1993 and again in November 1993. The demonstration was terminated in April 1995 and eligible enrollees were transferred to Medicaid.

Waivers for the demonstration in South Carolina and Washington were approved in February 1993. Enrollment began in February 1993 in South Carolina and April 1993 in Washington. The South Carolina demonstration received an extension through January 31, 1997, while the Washington demonstration ended March 31, 1996.

Maine and Washington utilized an individual enrollment model, while South Carolina had a group enrollment model, targeting small businesses (3-100 employees) in two counties. Income eligibility differed across the three sites, with Maine enrolling adults (age 20 and over) under 100 percent of FPL and providing a 12 month transition for those between 100 and 150 percent FPL. The other two states included individuals up to 150 percent of FPL. Only Maine used an asset test in addition to income.

In South Carolina, employers paid a portion of the premium; employees with incomes above 100 percent of FPL could be charged up to 25 percent of the premium at the employer's discretion. Maine required cost-sharing for those above 100 percent FPL in the 12-month transition period. Washington had no cost-sharing of any type.

Each program involved a managed care component, ranging from capitated contracts with managed care organizations (MCOs) in Washington to primary care case management (PCCM) programs in the other two states (although Maine's PCCM program was initiated on a pilot basis only a few months before the program ended). Provider reimbursement in Maine and South Carolina generally was based on Medicaid payment levels, with an additional monthly case management fee to PCCM providers.

Employer involvement was the underpinning of the South Carolina demonstration, with the insurance product marketed directly to employers. Washington had planned to develop an employer component, with direct marketing to employers, but that never came to fruition. In Maine, the State had the option to require employees to accept employer-based coverage if it was offered, and if the state deemed it to be a cost-effective alternative. However, due to administrative complexity both for the State and employers, few enrolled through this option.

1.3 Goals of the Evaluation

The similarities and differences in characteristics of the three Medicaid Expansion Demonstration programs provide a rich opportunity for evaluating the acceptability and feasibility of covering the uninsured through the Medicaid program. The three programs provide a range of features which can be compared and contrasted:

- **Enrollment models** include individual enrollment in Maine and Washington versus group enrollment in South Carolina.

- **Managed care options** include fully-capitated in Washington, PCCM in South Carolina, and no managed care for most of the time in Maine.

- **Program orientation** reflects the level of association with traditional Medicaid which was high in Maine and low in South Carolina and Washington.

The evaluation addresses the performance of the demonstrations with respect to enrollment, costs and utilization, and access and satisfaction. In addition, we highlight employer experiences with the South Carolina demonstration (SCHAP). One of the challenges of conducting a multi-state evaluation is to identify the key evaluation questions that can be answered with the available data and that are relevant to policymakers. The following research questions were addressed in this evaluation:

Enrollment

- Who joined the demonstration and why?
- How successful was each State in achieving its enrollment targets?
- What administrative features contributed to each program's enrollment experience?

Utilization and Costs

- What are the trends in costs and utilization according to length of enrollment in the demonstration? Is there evidence of pent-up demand among enrollees?
- How do utilization and costs of demonstration participants compare with those of a traditional Medicaid population (South Carolina) or other privately insured group (Washington)?

Access and Satisfaction

- How do the three programs vary in the level of access and satisfaction reported by enrollees?
- What is the impact of loss of insurance coverage on access and satisfaction?

Employer Participation

- How did employers learn about SCHAP?
- What kinds of employers enrolled in SCHAP and how did they differ from employers that did not join SCHAP?
- How did participating employers assess their experience with SCHAP?
- What impact did SCHAP have on the private market for small business insurance?

Ultimately, our goal is to synthesize the results of the demonstration to determine the implications for expanding insurance coverage to low-income uninsured populations in other states or nationwide.

1.4 Organization of This Report

This report contains nine additional chapters. Chapter 2 presents a more detailed description of the three demonstration projects. Chapter 3 describes the data and methods used in the evaluation. Chapter 4 discusses the enrollment experiences of the three demonstrations, while Chapters 5, 6, and 7 analyze patterns of costs and utilization in each of the three demonstrations. Chapter 8 compares the levels of access and satisfaction within the three programs and Chapter 9 highlights employer participation in the South Carolina demonstration. Finally, Chapter 10 synthesizes the results of the evaluation and presents "lessons learned" from the demonstration.

2

Description of the Medicaid Expansion Demonstration Programs

This chapter presents an overview of the three programs participating in the Medicaid Expansion Demonstration, including their origins, eligibility criteria and enrollment processes, benefit structure, provider relations, and employer participation. Knowledge of the organizational structure and features of the three programs is essential to understanding each program's performance with respect to access, satisfaction, utilization, and costs. Variations in performance across the three programs are related to variations in structure. A full description of each program was presented in the Final Case Study Report (HER, 1996).

2.1 Maine

Origins. The ***Maine Health Program (MHP)*** was a statewide demonstration project conducted by the Maine Department of Human Services, the State Medicaid agency. The Maine Health Program began in October 1990 as a state-only program for the low-income uninsured to extend Medicaid-like coverage to adults at or below 95 percent of the Federal Poverty Level (FPL).[1] Maine sought to participate in the Medicaid Expansion Demonstration to gain Federal cost-sharing in order to expand program enrollment. The Federal demonstration program became effective October 1992 and subsumed the adult enrollment in the pre-existing State-funded program. The Federal demonstration project differed from the former MHP in two ways: (1) the eligibility threshold was modestly increased from 95 percent of the Federal poverty level (FPL) to 100 percent FPL; and (2) a primary care case management (PCCM) system was eventually implemented in two counties.

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[1] A companion demonstration program was implemented for children under the Medicaid Extension Demonstration. The Medicaid Expansion Demonstration included adults only.

Eligibility and Enrollment. MHP was open to adults (age 20 and older) who were residents of Maine, who had incomes at or below 100 percent FPL at time of application, and who met the Medicaid assets test. Transitional eligibility was extended for 12 months for those whose income exceeded 100 percent FPL but remained below 150 percent FPL. Like the traditional Medicaid program, recertification occurred monthly.

In November 1992, approximately 2,100 enrollees transferred from the State-funded program to the Federal demonstration program. Despite uncertainty about program continuation due to State budget crises, MHP reopened enrollment in February 1993 with a limit of an additional 2,500 members. Only about 800 new enrollees were found to be eligible for the program through the open enrollment process. An additional 3,000 individuals who were denied Medicaid coverage were determined eligible for MHP, bringing total enrollment to nearly 6,000. Enrollment was permanently closed in December 1993 until MHP terminated in April 1995.

Benefits. Excluding institutional care, day health services, perinatal services, and targeted case management, MHP benefits were basically the same as those of Maine's regular Medicaid program. In particular, there was no deductible and there were no copayments for physician office visits. However, due to adverse experience under the former State-funded program, MHP placed additional limits on inpatient psychiatric and substance abuse treatment. The State had found that monthly costs per adult MHP enrollee were running about three times as much as those under Maine's regular Medicaid program.

Provider Relations. MHP services generally were provided under the State's Medicaid provider contracts. However, the program experienced reimbursement reductions for inpatient hospital care due to fiscal constraints. Initially, MHP paid hospitals 80 percent of hospital charges, falling to 40 percent in 1993, and by 1994, MHP ceased paying hospitals for any MHP hospital-based care.

The State had intended to convert MHP to a PCCM program by mid-1994. However, due to other priorities within the Medicaid program, this objective was never achieved. Instead, PCCM was implemented on a pilot basis in late 1994 (only a few months before the program ended). The pilot took place in two counties (Kennebec and Sommerset, both in central Maine) and included both MHP and traditional Medicaid eligibles.

Employer Participation. For enrollees who had access to an employer-sponsored health plan, the State determined whether or not it was cost effective to "buy in" and pay the employee's premium share. If it was cost effective, the State required the enrollee to participate through the employer's plan. MHP then provided "wraparound" coverage and paid for any MHP benefits not covered by the employer-provided plan. About 2.5 percent of MHP enrollees participated through employer-based plans, representing about 35 different employers. Originally, the program was designed to pay the employer or insurer the employee's premium share; however, most employers were unwilling to participate on this basis due to the administrative difficulty of processing premium payments on other than a payroll deduction basis. Thus, the legislation was amended to authorize MHP to reimburse employees directly for the premium share.

Summary. MHP's history can best be characterized as extremely volatile and precarious. During the program's entire existence, including periods of open enrollment, the future of the program was in jeopardy due to fiscal uncertainties. When the State attempted to terminate the program in March 1994, a lawsuit was filed and the program was reinstated until April 1995. The program ended after 30 months, instead of operating for the full 36 months intended under the Congressional authorization.

2.2 South Carolina

Origins. The ***South Carolina Health Access Plan (SCHAP)*** was an employer - based insurance program for small businesses located in Horry County (a major coastal resort area) and Marion County (an adjacent rural area) that employed from 3 to 100 workers[2] and that had not offered health insurance for at least 12 months. The development of SCHAP represented a convergence of State and local initiatives to provide health insurance coverage to those who are working but who are uninsured. Horry and Marion Counties had relatively high levels of uninsured, low-income workers, due in part to the high level of seasonal employment. Although operated by the State Medicaid agency, SCHAP was deliberately "de-linked" from Medicaid in the public view.

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[2] Initially, the program was targeted to employers with 3-50 employees. The program increased the upper limit to 100 employees to accommodate employers who did not offer health insurance and were interested in participating in the demonstration.

The program was implemented in February 1993, and was scheduled to end in January 1996. HCFA granted the State a 12-month extension, through January 31, 1997, under its Section 1115 authority.

Eligibility and Enrollment. Employees of participating employers were eligible to enroll if they were South Carolina residents and their family income did not exceed 150 percent FPL. Employers could choose to offer individual coverage only or individual and family coverage. The State established an on-site field office in Conway, South Carolina, which was responsible for recruiting employers, screening eligibility of employers and employees, and assisting members with enrollment. SCHAP membership staff personally interviewed all employers and employees to determine their eligibility. Eligibility redetermination took place annually.

SCHAP chose to maintain a membership ceiling of no more than 1,300 participants at any one time. Enrollment peaked at a little more than 1,200 members, but this took well over two years to achieve.

Benefits. SCHAP benefits were based on traditional Medicaid benefits, although certain limits were imposed to contain health care costs assumed by the demonstration. For example, SCHAP covered inpatient stays, but imposed a 3-stay limit annually until the limit was eliminated in 1996; physician visits, including visits to rural clinics and podiatrists, were limited to 12 per year; prescription drugs were limited to three per month, with a $1.50

copayment; and home health visits were limited to 50 visits per year. Additionally, the SCHAP benefit package excluded maternity and neonatal care (as pregnant women and infants were eligible for Medicaid); non-emergency services delivered in a hospital emergency department; nursing home and community-based long-term care; organ transplants for adults; institutional care in psychiatric hospitals, mental retardation facilities, and substance abuse facilities; residential care in substance abuse and mental health facilities; end stage renal disease services; hospital administrative days; and services covered by other State or Federal programs. All nonemergency services had to be approved by the primary care coordinator (see below).

Provider Relations. Upon enrollment, SCHAP members selected a primary care coordinator (PCC) from a list of participating physicians. The PCC was responsible for delivering primary care services and coordinating prior authorization of all other services. Reimbursement included fee-for-service payments using the Medicaid fee schedule and a monthly case management fee of $4.00 for each enrolled member. Establishment of the PCC program was an innovation under SCHAP, representing the first venture into Medicaid managed care in South Carolina.

Employer Participation. The underpinning of the SCHAP demonstration was employer-based group enrollment. SCHAP staff performed extensive outreach and marketing to recruit eligible employers. Employers and providers alike expressed satisfaction with the program and felt that it met an important need. It is not clear whether offering health insurance was beneficial to employers in recruiting or retaining employees; however, employers felt better knowing that their employees (and in many cases themselves) had insurance coverage. Employers also offered praise for the administration of the program, recognizing that the program offered considerable customer support in Horry and Marion Counties.

Summary. In general, SCHAP is viewed as a broad success. Despite the narrow eligibility criteria imposed on employers, employees, and their families, the program eventually reached its modest enrollment projections. Financially, the program appears to have performed reasonably well, with Medicaid reimbursements for SCHAP members below those of the traditional Medicaid population (upon which the premium was based). Administrative expenses, on the other hand, were high, averaging 40 percent of total program expenditures. The high administrative expenses reflect the intensive efforts involved in outreach and recruitment of employers, as well as the extensive membership services offered to SCHAP enrollees (e.g., education about how the PCC component worked). The SCHAP program ended in January 1997. The State was unable to obtain additional support to continue the program, due to lack of support among key stakeholders.

2.3 Washington

Origins. The ***Health Access Spokane (HAS)*** demonstration was a joint venture between the State's Medicaid program and a State-funded program called the Washington Basic Health Plan (BHP). BHP was created as a five-year demonstration program by the Washington Legislature in 1987 and became a permanent insurance program in 1993.

Through contracts with managed health care plans (MHCPs), BHP provided subsidized health insurance for residents under age 65, with family incomes below 200 percent of FPL.

HAS was conceived as an intermediate alternative between traditional Medicaid and BHP. Its central purpose was to test the State's ability to provide continuous, seamless health care coverage to low- income residents as they moved in and out of eligibility for specific programs. Spokane County was selected as the demonstration site because of the high uninsured rate and because of prior managed care experience serving both BHP and Medicaid populations within that county.

Eligibility and Enrollment. HAS eligibility was limited to individuals who were ineligible for Medicaid, and who had family incomes less than 150 percent FPL. Eligibility redetermination took place only once during the demonstration.

HAS enrollment was targeted at 4,200, but after the first year, HAS enrollment reached only 35 percent of this objective. Faced with low enrollment numbers, the HAS Steering Committee recommended early termination of the program in July 1994 because they were unwilling to commit significant resources to conducting a large-scale marketing initiative.

When the media, and in turn, legislative staff, became aware of the early termination of HAS, the State was bombarded with criticism for canceling a program that provided much-needed health coverage for low-income individuals and also brought in Federal matching funds. The State reversed its decision and decided to continue the program for the full 36-month period.

Ironically, it was through the attempted termination effort that HAS became visible in the community. However, for most of its history, monthly enrollment was at or below 1,500 members. Reasons for low enrollment included limited outreach, marketing, and name recognition of the program; welfare stigma in Spokane County; and inadequate administrative supports for identifying and enrolling eligible members. The lack of a local presence in Spokane County also diminished the program's visibility and acceptance.

Benefits. The benefit package for HAS was richer than the basic BHP package, but not as generous as traditional Medicaid coverage. BHP required an income-adjusted premium from all enrollees, copayments for non-preventive services, and a 12-month waiting period for coverage of pre-existing conditions. In contrast, HAS had no premiums, no copayments, and no waiting periods. Medicaid's maternity, mental health, vision, dental, and long-term care benefits were not included in HAS.

Provider Relations. A strength of the HAS demonstration was the pre-existing relationships with the two MHCPs which enrolled beneficiaries, Group Health Northwest and Medical Services Corporation. These MHCPs had considerable experience serving low-income populations and were well-accepted within the community. Group Health Northwest has both staff model and network model HMO arrangements, although only the staff model HMO was offered to HAS enrollees; physicians were employed by the HMO and paid on a salaried basis. Medical Services Corporation is an IPA-model HMO. At the time of the HAS demonstration, most physicians were paid on a discounted fee-for-service basis with a withhold. Two additional plans were offered to HAS enrollees for the last nine months of the program, Qual-Med and Blue Cross Community Health Plan, but their enrollment was quite small due to their late entry into the program.

Employer Participation. The State had planned to include an employer component in HAS, to enroll low-income workers in small businesses (up to 25 employees). This component met with some resistance among employers who were concerned about subsidizing coverage for their low-income workers, and not offering coverage to their higher-income employees. Another concern was the time-limited nature of the demonstration (three years), which would result in eliminating a benefit at the end of the experiment. Another issue pertained to the effect of HAS on employers who currently offered insurance – would they merely shift coverage from existing plans (which were not subsidized) onto HAS? The employer component was never implemented, due to these concerns as well as other priorities within the State.

Summary. The HAS demonstration illustrated the complexity of pursuing a joint venture between two agencies with different cultures. The Health Care Authority (HCA), which administered BHP, had an insurance administration background, whereas the Medicaid agency possessed a client advocacy perspective. HCA placed a stronger emphasis on costs and operated in a more business-oriented environment, influenced by the commercial insurance perspective of many HCA employees. These differences in philosophy resulted in conflicts around key features of the program, especially marketing and outreach, and led to the decision to terminate the program prematurely. Public outcry, however, salvaged the program. Despite disappointments concerning program enrollment levels, the State and

MHCPs are quick to point out that the people who were served by the program benefitted from the comprehensiveness of the benefits and the lack of cost-sharing.

3

Data and Methods

This chapter describes the data sources and methods used in the evaluation of the Medicaid Expansion Demonstration. The evaluation involved a multifaceted approach to gather both qualitative and quantitative information. Section 3.1 describes the ***case study component***, which assessed the implementation of each demonstration. Section 3.2 discusses ***the primary data collection component***, in which we collected survey data on insurance status, utilization, health status, access to care, and satisfaction with care for demonstration participants and selected comparison groups. Section 3.3 summarizes the ***administrative data component***, which provided information on enrollment trends as well as the cost and utilization patterns of demonstration participants, traditional Medicaid beneficiaries, and other enrollees in state-sponsored health insurance programs for low-income populations.

3.1 Case Studies

The case study was the qualitative component of the evaluation. Through on-site interviews and review of program documents, the case study enabled us to describe and document the history and process of the demonstrations. Some evaluation questions could only be addressed through the case study, such as the nature of organizational had to have from 3 to 100 employees and some employees who earned less than $18,500 per year. Of the 1,610 respondents, only 104 employers were eligible and completed the employer interview.

Of the 104 employers who were interviewed, 48 (46 percent) provided a list of employees for the comparison employee sampling frame. These lists included a total of 318 employees. A total of 267 (84 percent) were classified as respondents, of whom only 30 were eligible. To be eligible, an employee had to report annual family income no greater than 150 percent of the Federal Poverty Level and had to be without health insurance. After adjusting for nonresponse and incorporating the response-adjusted employer weight, the weighted total of eligible nonparticipants was approximately 65 persons. It was decided that 30 interviews were inadequate for statistically reliable estimates, so we made no further use of this group.

3.2.4 Washington Survey Design

Overview. We encountered significant delays in fielding the survey due to lack of enrollment of previously uninsured individuals, as well as problems in gaining access to the comparison group. As a result, the Washington survey design was limited to one round of the enrollee sample, with no in-state comparison group. The design is simply the following:

	Time 1
Experimental Group	X

Because of the limitations of this design, the Washington survey data were restricted to cross-sectional comparisons of time 1 survey data among the three demonstration programs.

Washington Experimental (Enrollee) Group. The Health Access Spokane (HAS) demonstration involved individual (nongroup) insurance as in Maine. The eligible population was defined as all HAS subscribers (i.e., case heads) between the ages of 18 and 64, who had initially enrolled in HAS between July 1994 and June 1995 (6-18 months before the survey), and who had not been previously enrolled in Medicaid or the Basic Health Plan (BHP). HAS permits family enrollment, but dependents were excluded from eligibility for the survey. From a population of 491 HAS participants who met the initial criteria, we selected a sample of 292 cases. A total of 202 (69 percent) of the sampled cases responded.

Washington Comparison Group. Our original intention was to utilize a design similar to that in Maine, whereby we would select a sample of demonstration participants and a comparison sample of Food Stamp enrollees who were neither enrolled in the demonstration nor in Medicaid. However, the Washington demonstration experienced considerable delays in enrolling the previously uninsured population, due to enrollment caps and lack of marketing. Subsequently, we revised our design to include a comparison group from a list of Basic Health Plan enrollees in Spokane County (the demonstration county) who were eligible for, but not enrolled, in the demonstration. This would have provided a contrast of two programs with different benefit packages and cost-sharing requirements, and would have provided insights into the eligibility determination and enrollment processes. However, the BHP administrator and the Washington Attorney General determined that releasing the names of BHP members for the HAS evaluation would violate the confidentiality of BHP members and refused to permit this use of the BHP enrollment list. Thus, we did not obtain a comparison group in Washington.

3.2.5 Survey Administration

The surveys were conducted by Research Triangle Institute using computer-assisted telephone interviewing (CATI). The interview for enrollees and comparison group members averaged 25 minutes duration and the employer interview averaged 15 minutes in South Carolina.

South Carolina employers were interviewed once, from June to September 1994. Beneficiaries in South Carolina and Maine were interviewed twice, from June to September 1994 and again from September to November 1995. In Washington we interviewed beneficiaries once, in January and February 1996. Our HAS beneficiary sample was designed to include only beneficiaries who had not previously been enrolled in BHP. At the time of our first round of interviewing in Maine and South Carolina, HAS had enrolled too few beneficiaries who had not been previously enrolled in BHP. Thus, the initial survey in Washington was postponed until late in the evaluation project to allow for more enrollment of new beneficiaries.

3.2.6 Analytic Methods

Our survey data analysis included only those respondents who indicated that they were enrolled in the demonstration programs when interviewed. We therefore excluded from the sample, 3 cases in Maine, 3 in South Carolina, and 5 in Washington. The final sample sizes utilized in the analysis were 437, 338, and 197 enrollees in Maine, South Carolina, and Washington respectively.

The analysis also adjusted for the complex sample design used in the surveys. Assumptions of simple random sampling would understate the true variances and hence, overstate the statistical significance of some results. In addition, all analyses were weighted to adjust for probability of selection and non-response. All analyses based on the survey data were performed in SUDAAN, including both descriptive and multivariate analyses. Cross-tabulations and chi-square tests of significance were produced in PROC CROSS-TAB, while means and t-tests were performed in PROC DESCRIPT. Regression analysis was performed in PROC RLOGIST for logistic regressions and PROC REGRESS for weighted least squares.

3.3 Administrative Data

Administrative data were used for the enrollment, utilization, and cost analyses. From each program, we acquired complete enrollment and claims data for demonstration participants to determine the changes in membership, utilization, and cost from year to year and over the three year period.

Additional data were obtained to permit state-specific analyses. For example, we acquired Medicaid enrollment and claims data for the comparable time period in Horry and Marion counties in South Carolina, which enabled us to conduct an analysis of the incremental cost of enrolling the demonstration population relative to traditional Medicaid enrollees. We also obtained enrollment and claims/encounter data for enrollees in another publicly-subsidized insurance program for low-income individuals in Spokane County, Washington, to perform an analysis of variations in utilization across the two programs (which had different benefit structures). Finally, we acquired pre-demonstration enrollment data to account for public program participation among demonstration participants, prior to their enrollment in the demonstration.

Whereas the survey was conducted on a panel of respondents (i.e., the same persons were interviewed at Time 1 and Time 2), claims data were obtained for the entire population of demonstration and Medicaid enrollees in the relevant geographic area during each time period.

Further details on State-specific data and methods are provided in Chapter 5 (Maine), Chapter 6 (South Carolina), and Chapter 7 (Washington).

4

Eligibility and Enrollment in the Medicaid Expansion Demonstration

This chapter provides an overview of the eligibility criteria, outreach activities, and enrollment processes across the three demonstration programs. Each of the three demonstrations was expected to last three years (36 months), but in reality their months of operation varied. The Maine Health Program (MHP), which started as a State-funded program in October 1990, became a federal demonstration in October 1992. The MHP program was threatened with termination in each legislative session and this highly volatile program finally ended prematurely after 30 months. The South Carolina Health Access Plan (SCHAP) began in February 1993 and ended January 31, 1997, operating for a period of 48 months.[1] In Washington State, Health Access Spokane (HAS) was launched in April 1993 and ended 36 months later in March 1996 after surviving an attempt to terminate the program in July 1994. An in-depth discussion of the enrollment trends in each of these programs is presented.

This chapter also addresses who was enrolled in the demonstrations, their insurance status prior to enrollment, and how long they remained enrolled in the programs. In addition, state-specific analyses on the probability of enrollment in Maine and probability of disenrollment in South Carolina are presented.

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[1] The SCHAP demonstration was granted an additional Federal waiver to extend the program beyond the original period. However, no new employers were admitted to the program after January 31, 1996. SCHAP was permitted to enroll new members from already-participating employers. Our analysis considers enrollment through March 1996, for a period of 38 months.

4.1 Eligibility Criteria

The Omnibus Budget Reconciliation Act of 1990 specified the general design of the demonstrations, including the eligibility criteria. The demonstrations were to provide health coverage for individuals not eligible for Medicaid and who had family incomes below 150 percent of the Federal Poverty Level (FPL). A comparison of the eligibility criteria across the three demonstrations is provided in Exhibit 4-1. Congress had mandated that at least one of the demonstrations be implemented state-wide and thus in Maine coverage was extended to all eligible state residents. In South Carolina, two counties were chosen, Horry and Marion, and in Washington the demonstration took place in a single county, Spokane County.

Eligibility in South Carolina was employer-based, and employers were given the option to enroll dependents of employees. Maine and Washington offered nongroup coverage, although they differed in that individuals and family units were eligible for coverage in Washington, while only individuals were insured in Maine.

Age and income criteria were also clearly defined under each demonstration. South Carolina and Washington had similar age limitations, enrolling children and adults under 65 years of. In Maine enrollees had to be 20 years or older.[2] In South Carolina and Washington, the income threshold was at or below 150 percent of the Federal poverty level (FPL), with no restriction on assets. To be eligible for MHP, household income at the time of initial eligibility had to be at or below 100 percent FPL and had to meet the Medicaid asset test ($2,000 for a single person, $3,000 for a couple, and $100 for each child). In a two-earner

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[2] Maine offered a companion Medicaid Extension Demonstration for children.

Exhibit 4-1

Eligibility Criteria of the Three Demonstrations

	Maine Health Program	South Carolina Health Access Plan	Washington Health Access Spokane
Area of Residence	State-wide	Horry and Marion Counties	Spokane County
Employer participation	Limited • Enrollees had to join available employer plans if it was less expensive to pay employee share and coordinate benefits with MHP	Yes • Firms employing 3 - 100 persons • Not offering insurance within 12 months • At least 50% of employees have family income below 150% FPL • Minimum of 3 employees need to enroll	No
Individual/ Family unit	Individual only • US citizen; Maine resident	Employee and dependents • Employed at least 30 hours/week and 9 months/year • Permanent S.C. resident • Employer given option to enroll dependents	Individual or family unit
Age	20 years or older	Less than 65 years	Less than 65 years • Those younger than age 19 were transfered to BHP-Plus in July 1994.
Income	Household income at or below 100% FPL • Transitional eligibility (12 months) to 150% FPL • Medicaid asset test	Household income at or below 150% FPL	Household income at or below 150% FPL

family, unlike Medicaid, a second car was exempted from the asset test. In addition, MHP provided a transition period to allow enrollees to temporarily maintain coverage when household income rose above the poverty level. Enrollees whose household incomes ranged between 100 and 150 percent of FPL could continue participating in MHP for up to 12 months, provided that they paid a premium: individuals with household income below 125 percent of FPL paid 1.5 percent of their income, and those with income between 126 and 150 percent of FPL paid 2.0 percent.

As outlined above there were many similarities in the eligibility criteria among the demonstrations but there were also significant differences. In making comparisons on enrollment across the demonstrations, the eligibility criteria will be further highlighted.

4.2 Outreach and Enrollment Process

Each of the demonstration's staff was responsible for developing marketing plans and designing enrollment procedures. A description of the outreach activities, application procedures, and plan/physician choice is provided in Exhibit 4-2.

4.2.1 Outreach

A key aspect of understanding each program's enrollment experience is the nature of outreach mechanisms used, and their effectiveness in informing prospective enrollees about the program.

Exhibit 4-2

Enrollment Process Across the Three Demonstrations

	Maine Health Program	South Carolina Health Access Plan	Washington Health Access Spokane
Member outreach	• Advertisements were printed in four newspapers 2 weeks prior to open enrollment • Letters and registration materials were sent to all DHS regional offices, health centers, and hospitals	• News articles and presentations to provider and employer groups • Mass media advertising • Direct mail and phone solicitation • Toll-free "800" line for inquiries	• Outreach handled by BHP office (Olympia) • Brochures and handbook developed for HAS • Limited media marketing in Spokane County • Outreach strategy developed but never implemented
Application procedures	• Registrations accepted at DHS regional offices, health centers, hospitals; also by telephone	Employer • Employers received in-person screening Employee • Submitted application through employer • Each employee received in-person screening	• Application submitted to BHP • Applicants completed enrollment form, including Medicaid screening questions • If Medicaid eligibility likely, referred to local CSO • If HAS eligible, enrolled (if open slots) or placed on waiting list
Plans/ Physician choice	• Primary Care Case Management (PCCM) program never implemented except on pilot basis in two counties shortly before MHP ended	• Members selected Primary Care Coordinator (PCC)	• Enrollees chose among capitated managed care plans

Maine. When MHP's adult enrollment was first reopened in February 1993, an interval for program registration was announced to the public, primarily through print media. An advertisement ran in four major newspapers in Portland, Bangor, Augusta, Lewiston. In addition, informational and registration materials were sent to the 14 DHS regional offices, 26 health centers, and 42 hospitals within the state. A toll-free 800-number was also available to provide information on the MHP. One local advocacy group, Consumers for Affordable Health Care, sent information to more than 5,000 addresses.

South Carolina. SCHAP's primary outreach was to businesses, given the employer-based enrollment criteria. Media coverage and direct phone solicitations were utilized to identify eligible businesses. Although initially SCHAP relied heavily on word of mouth, staff also marketed to employers through presentations to providers and business groups. News releases were issued through Governor Carroll A. Campbell's office and newspaper and television coverage publicized the grand opening visit by Senator Ernest F. Hollings. Additional publicity mechanisms included public service announcements via radio, participation in radio and television talk shows, use of systematic telephone solicitation, and operation of a toll-free telephone line for inquiries. SCHAP also conducted direct mail campaigns with small businesses in the two counties. (Chapter 9 provides additional discussion of SCHAP's marketing and outreach efforts.)

Washington. To launch HAS, a comprehensive handbook and brochure were developed. The handbook offered detailed information on the schedule of benefits, covered services, managed health care plans, and rights and responsibilities of enrollees. However, the brochure and handbook were not widely distributed. One year into the program, an outreach strategy was developed by the HAS Project, including more widespread distribution of HAS materials, direct mailings, and monthly radio advertisements. None of these initiatives was put into place because the marketing plan was not approved and no resources were allocated to the HAS marketing effort. The managed care plans proposed that HAS flyers should be distributed with utility bills and expressed willingness to finance this marketing effort; the idea did not receive support from HAS administrators. Nevertheless, some attempts were made to increase awareness of HAS, such as participation in a health fair in Spokane in Fall 1995 (less than six months before the program ended permanently), to distribute information on HAS, assist in completing the HAS/BHP application, and answer questions on an individual basis.

4.2.2 Enrollment Procedures

Maine. Registration forms for MHP could be completed at DHS regional offices, health centers, hospitals, and via telephone. All submitted Medical Assistance application forms were screened for Medicaid eligibility by the Bureau of Income Maintenance. Determination of eligibility was made within 45 days of receipt of the application, but benefits were retroactive to the first of the month in which the application was sent to the prospective applicant. As MHP's enrollment was on an "individual" basis, one adult in a family could be selected and enrolled in the program, and another adult in the same household would not necessarily be included. In addition, MHP enrollees had to participate in any available employer plans, if DHS determined that it would cost less to pay the employee share of the premium and coordinate benefits with MHP. Applicants supplied the requisite information on benefits available from their employers; all applicants were assessed for employer coverage. However, employer-based coverage was not a program feature that the state actively pursued.

Individuals who met the eligibility criteria were enrolled in MHP and a full review of eligibility was conducted every six months after enrollment. If an enrollee did not return the re-certification form, he or she was terminated from the program and, unlike the traditional Medicaid program, he or she could not re-enroll in MHP.

South Carolina. Employers were first screened over the telephone to be sure they met SCHAP's basic eligibility criteria (e.g., number of employees and no prior insurance). Firms that passed this screen were considered potentially eligible and received a visit from a membership specialist. Each potentially eligible employee of the employer was interviewed personally by one of the SCHAP membership staff. Employees who wished to enroll were screened for Medicaid eligibility. Only those employees not eligible for Medicaid were enrolled in SCHAP. In addition, upon enrollment, members selected a Primary Care Coordinator (PCC) from a list of participating physicians. The SCHAP staff provided the list of PCCs and assisted the beneficiary in choosing a PCC for each family member who was enrolling. The PCC was responsible for delivering primary care and coordinating prior authorization of all services.

When an individual or family enrolled in SCHAP, they were eligible for one year. The annual recertification was conducted via mail and enrollees were sent a letter asking them to update annual income information. The program followed up with a phone call if a response was not received. The program originally performed recertifications every six months but found it to be too labor-intensive.

Washington. Applications for HAS were accepted through the Basic Health Plan (BHP), a subsidized health insurance program for the low-income population in Washington State. HAS enrollment was carried out as an additional step in the BHP enrollment process. All individuals from Spokane County, whether they applied for BHP or HAS, were supposed to be screened for HAS eligibility. If families appeared eligible for Medicaid, then documentation of ineligibility for Medicaid coverage had to be obtained before these individuals could be enrolled in HAS. Individuals requiring proof of Medicaid ineligibility had to visit their local Community Service Office (CSO) to obtain the necessary documentation. All other individuals or families qualifying for HAS were sent letters indicating their eligibility. There could be instances where some members of a family would qualify for HAS without verification of Medicaid eligibility while other members did not (e.g. children). In such cases, those immediately eligible were enrolled in HAS and those requiring further documentation were sent letters requesting this information. When BHP-Plus was introduced in July 1994 (which expanded Medicaid eligibility for low-income children), an additional step was added to verify eligibility of all children for BHP-Plus.

Although recertification of eligibility was originally planned every six months, verification of continued eligibility for HAS was only performed once.

4.3 Enrollment in the Medicaid Expansion Demonstration

This section discusses the monthly membership in the Medicaid Expansion Demonstration and compares enrollment patterns across the three programs. In particular, we highlight their experience in meeting their projected enrollment goals and identify reasons for their success or failure. Finally, we summarize the most important reasons for joining the programs, as reported by the enrollees.

4.3.1 Enrollment Trends

Exhibit 4-3 shows enrollment by month in each of the three demonstration programs. Both MHP and HAS had significantly more members in the early stages of the programs in comparison to SCHAP, as the first enrollees in MHP were those who rolled over from the State-funded program and those in HAS were transferred from BHP. MHP reached peak enrollment earlier than the other two programs, aided in part by the transfer of enrollees from the State program, as well as the recruitment of new enrollees through open enrollment and a review of denied Medicaid applications (See Figure 4-1). The maximum monthly enrollment of 6,095 was reached in December 1994 in MHP and then enrollment was capped for the remainder of the program. Both SCHAP and HAS reached maximum enrollment towards the end of the demonstration, with SCHAP reaching 1,211 members in October 1995 and HAS enrolling 2,226 members in January 1996.

Exhibit 4-3

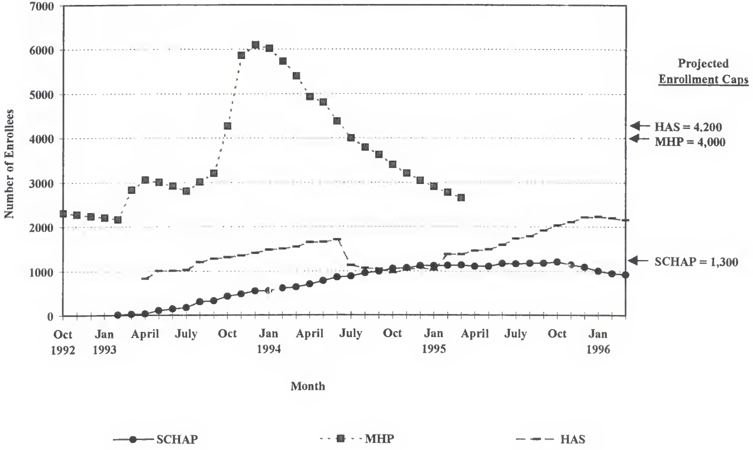
Medicaid Expansion Demonstration: Enrollment By Program By Month

		Maine Health Program		South Carolina Health Access Plan		Washington Health Access Spokane	
1992	Oct	2,308	← Rollovers				
	Nov	2,273	State to				
	Dec	2,234	Federal				
Subtotal Enrollment months		6,815	program				
(Average Per Month)		(2,272)					
1993	Jan	2,203					
	Feb	2,160	← Open	14			
	March	2,831	Enrollment	26			
	April	3,059		37		833	← BHP
	May	3,001		111		1,006	enrollees
	June	2,915		146		1,002	transferred
	July	2,803		176		1,024	to HAS
	Aug	3,012	Medicaid	305		1,200	
	Sep	3,205	denials	[illegible]		1,276	
	Oct	4,274	reviewed	[illegible]		1,309	
	Nov	5,864	←	481		1,344	
	Dec	6,095	←	543		1,407	
Subtotal Enrollment months		41,422	Enrollment closed	2,590		10,401	
(Average Per Month)		(3,452)		(235)		(1,156)	
1994	Jan	6,015		553		1,479	
	Feb	5,735		612		1,501	
	March	5,402		633		1,544	
	April	4,925		699		1,641	Attempted
	May	4,806		777		1,650	termination of
	June	4,372		862		1,704	HAS / BHP-Plus
	July	3,995		879		1,125	← introduced
	Aug	3,790		952		1,062	
	Sep	3,621		991		1,049	Recertification
	Oct	3,401		1,054		964	← of HAS
	Nov	3,208		1,069		1,026	eligibility
	Dec	3,043		1,117		1,080	
Subtotal Enrollment months		52,313		10,198		15,825	
(Average Per Month)		(4,359)		(850)		(1,319)	
1995	Jan	2,906		1,124		1,025	
	Feb	2,770		1,131		1,378	
	March	2,648		1,134		1,375	
	April			1,103		1,457	
	May			1,109		1,484	
	June			1,173		1,587	
	July			1,163	← Employer	1,732	
	Aug			1,176	enrollment	1,786	
	Sep			1,178	suspended for	1,916	
	Oct			1,211	phase-out	2,030	
	Nov			1,140		2,102	
	Dec			1,092		2,211	
Subtotal Enrollment months		8,324		13,734		20,083	
(Average Per Month)		(2,775)		(1,145)		(1,670)	
1996				1,005		2,226	
				949		2,199	
				923		2,155	
Subtotal Enrollment months				2,877		6,580	
(Average Per Month)				(959)		(2,193)	
All Months							
Total Enrollment months		100,550		29,399		52,889	
(Average Per Month)		(3,352)		(774)		(1,469)	
Total Ever Enrolled (Unduplicated)		7,776		2,197		3,367	

SOURCE: Primary analysis of enrollment data for the Medicaid Expansion Demonstration

Figure 4-1

Enrollment Trends for Maine, South Carolina and Washington:
Medicaid Expansion Demonstration



SOURCE: Primary analysis of enrollment data for the Medicaid Expansion Demonstration.

ace\final\fig4-1pwt

Although Maine was the shortest of the demonstrations it had the largest number of enrollment months, totaling 100,500. The average enrollment was also by far the highest in Maine with a mean number of 3,352 enrollees per month compared to 1,469 in Washington and 774 in South Carolina. The total number of individuals ever enrolled in the Medicaid Expansion Demonstration was 13,610, including 7,776 in MHP, 2,197 in SCHAP, and 3,637 in HAS. Of these, 12,166 (89 percent) were age 19 and over.

The enrollment patterns shown in Figure 4-1 were highly influenced by the outreach and enrollment decisions made by the program administrators. Exhibit 4-3 highlights key factors that affected enrollment in each program. In SCHAP, the constant effort to market the program to employers resulted in a steady increase in enrollment throughout the initial two years of the program. In Maine, open enrollment conducted in February 1993 increased enrollment by about 700 members in a single month and then with review of Medicaid denials in November 1994, there was another significant increase in membership. In Washington, there was a cap on BHP enrollment until July 1993. Since all HAS members were initially enrolled in BHP and then transferred to HAS, even those eligible for HAS were placed on the waiting list until the cap was lifted. Coupled with limited marketing efforts as discussed above, this resulted in very low levels of enrollment in HAS initially. Ironically, it was the attempted termination of the program in July 1994 that increased awareness of HAS and brought in new enrollees.

It is also important to realize that these programs were not functioning in isolation and that actions such as changes in eligibility criteria of other programs or establishment of enrollment ceilings would have impacts on the enrollment trends. In Washington, for example, the introduction of BHP-Plus, at the same time as the threatened termination of HAS, reduced the number of HAS enrollees by a third as all children under age 19 were transferred to BHP-Plus. In Maine, MHP enrollment was capped in December 1993. We observe a continuous decline in membership due to constant uncertainty about the future of the program.

4.3.2 Projected Enrollment Targets versus Actual Enrollment

As discussed above, the level of enrollment among the three programs differed significantly. The targeted enrollment, as indicated on Figure 4-1, also varied among the programs. The maximum enrollment allowed by legislation for the first year of MHP was 4,000 members. For SCHAP, the goal was to achieve an average monthly enrollment of 1,300 members and a maximum first year enrollment of 1,390. The targeted enrollment in HAS was initially 3,800 and later increased to 4,200.

As shown in Figure 4-1, SCHAP was the only program to nearly reach its targeted number of enrollees. MHP did not reach the target number of enrollees as planned in the first year, and only reached high levels of enrollment in the second year with the decision to review Medicaid denials. In Washington, peak enrollment of 2,225 members was well below the target (although this is largely due to the transfer of children from HAS to BHP-Plus).

4.3.3 Effectiveness of Outreach and Marketing

One of the key findings of the Medicaid Expansion Demonstration is that the level of effort invested in outreach and marketing has a direct effect on enrollment levels. South Carolina had the most intensive and diverse marketing strategy and this could account for the success in achieving the targeted enrollment. On the other hand, administrators in both Maine and Washington were cautious in their initial marketing and outreach activities because they had expected to be overwhelmed by applicants who wanted to join programs that provided "free" health coverage. This clearly did not occur and the low response rate during Maine's open enrollment indicates the importance of marketing and outreach.

Table 4-1 shows how a sample of demonstration participants heard about the programs. (The data are based on the time 1 telephone survey, as described in Chapter 3.) SCHAP enrollees were more likely to hear about the program through either a personal contact or through the media (90 percent) than in Maine (73 percent) and Washington (70 percent). The lower percentages in Maine and Washington undoubtedly reflect the automatic transfer of a large share of enrollees from other State programs.

In all three programs, the most common way enrollees heard about the demonstration was from another person, most often a friend or relative. Interestingly, MHP enrollees were most likely (12 percent) to report a health professional as the source of their information, supporting the theory that many individuals were enrolled in MHP when they sought treatment for an existing medical condition.

Table 4-1

Sources of Information Prior to Enrollment

	Maine Health Program (n=437)	South Carolina Health Access Plan (n=338)	Washington Health Access Spokane (n=197)
Heard about program			
Media only	6.5	19.2	23.0
Person only	59.3	58.0	40.4
Both media and person	7.3	12.6	6.6
None reported	26.9	10.2	30.0
If heard from media, source *			
Newspaper news story, other	32.6	44.1	5.8
Newspaper ad	8.7	24.3	10.2
Brochure/Pamphlet/Flyer/Billboard	34.1	23.2	57.6
TV	25.1	12.0	15.2
Radio ad	3.6	2.7	1.7
Newsletter from assoc. or org.	0.0	0.0	28.5
If heard about program from another person, who*			
Friend/Relative	44.6	33.3	75.8
Health Professional	12.1	0.8	9.7
Employer	1.2	59.6	0.0
State, County or local agency	25.8	4.2	11.2
Other person	18.4	11.6	9.5

*These percentages could total more than 100 as individuals could have cited more than one source.

SOURCE: Medicaid Expansion Demonstration Household Survey.

In South Carolina and Washington, more individuals heard about the program through the media than in Maine. This is not surprising as Maine did not launch an aggressive media campaign. About 83 percent of those who had heard about SCHAP from the media reported newspaper, television, or radio as the source, compared with 70 percent in Maine and 33 percent in Washington. In contrast, most of the HAS enrollees who had heard about the program through the media reported brochures and newsletters as their source. This again reflects the marketing approach favored by the programs, especially the lack of newspaper and television coverage in Washington.

4.3.4 Reasons for Joining the Demonstration

A program's outreach and marketing strategy can affect the perception of the program by its beneficiaries, which in turn can affect the risk pool which is attracted to the program. The telephone survey asked respondents to identify which of the following three reasons was the most important in their decision to join the program: a possible future accident or illness, a current medical condition, or routine check-ups. (South Carolina enrollees were given a fourth option of "my employer provided it" since it may not have been their decision to join.) The results are summarized in the Table 4-2.

In both Washington and South Carolina, the desire to insure against future accident or illness was the most common motivation to join the demonstration. MHP enrollees were most likely to cite a current medical as the primary factor (39 percent), compared with enrollees in South Carolina (7 percent) and Washington (19 percent).

Table 4-2

Most Important Reason for Joining the Medicaid Expansion Demonstration

	Maine Health Program (n=430)	South Carolina Health Access Plan (n=338)	Washington Health Access Spokane (n=186)
Possible future accident or illness	36.4%[a,b]	52.8%[c]	44.9%
Current medical condition	38.6[a,b]	6.7[c]	18.9
Routine checkups	25.0[a,b]	16.6[c]	36.2
Employer provided it	N/A	23.9	N/A

NOTE: [a] refers to significant difference at the 5% level between Maine and South Carolina, [b] between Maine and Washington, and [c] between South Carolina and Washington.

This is probably a reflection of the fact that many MHP members were enrolled when they visited a medical provider for an existing medical condition. That also is consistent with fact that may MHP enrollees had heard about the program through a health provider as discussed above.

Although a significant number reported routine checkups as the reason for joining the programs, this was not the most common response in any of the states. Interestingly, however, it was most common in Washington (reported by 36 percent), the only program to utilize a capitated managed care system, which emphasizes routine preventive care and primary care. In South Carolina only 24 percent reported joining the program because their employer provided it suggesting that most of the employees did want to join the program for their current or future medical needs.

4.4 Demographic and Socioeconomic Characteristics of Enrollees

4.4.1 Demographic Characteristics

The composition of enrollment across the programs was analyzed utilizing enrollment data submitted by the State agencies that administered the programs. The results are presented in Table 4-3. As mentioned previously, MHP had by far the highest number of total members ever enrolled at 7,776, followed by 3,637 in HAS, and 2,197 in SCHAP. About 30 percent of SCHAP enrollees and 22 percent of HAS enrollees were under the age of 20 as these programs enrolled dependents unlike MHP. The average age therefore in comparison to MHP, particularly for SCHAP, was much lower. Considering only adults enrolled in the programs (ages 20 and older), the average age ranged from 35 to 39, with South Carolina continuing to have the youngest enrollees, on average. This is likely explained by the program's focus on the *working* uninsured.

Across all three programs, the majority of enrollees were female, ranging from a high of 62 percent among HAS enrollees to a low of 52 percent among SCHAP members. The majority of enrollees were white and this is not surprising given the racial distribution in the areas where the programs were implemented. South Carolina had the highest concentration of minorities, again a reflection of the racial mix of the eligible population.

4.4.2 Family Structure

Information on family structure was obtained from the telephone survey. In particular, MHP enrollees were significantly more likely to be married (and living with their spouse) than

Table 4-3

Comparison of Demographic Characteristics (for all ever eligible enrollees)

	Maine Health Program		South Carolina Health Access Plan		Washington Health Access Spokane	
	Number	Percent	Number	Percent	Number	Percent
TOTAL	**7,776**	**100.0%**	**2,197**	**100.0%**	**3,637**	**100.0%**
Age Group*						
0-19	0	0.0%	656	29.9%	788	21.7%
20-24	1,603	20.6	241	11.0	408	11.2
25-34	2,377	30.6	586	26.7	792	21.8
35-44	1,929	24.8	427	19.4	777	21.4
45-54	1,114	14.3	216	9.8	502	13.8
55-64	753	9.7	71	3.2	370	10.2
Average Age	36		28		33	
Average Age (20 and older only)	36		35		39	
Gender Distribution						
Male	3,376	43.4	1,045	47.6	1,395	38.4
Female	4,400	56.6	1,152	52.4	2,242	61.6
Race						
White	6,615	85.1	1,636	74.5	2,789	76.6
Non-White	106	1.4	561	25.5	198	5.5
Unknown	1,055	13.5	0	0.0	652	17.9

* Age is defined as at the time of initial enrollment.

SOURCE: Primary analysis of enrollment data for the Medicaid Expansion Demonstration.

SCHAP and HAS members (Table 4-4). Consequently, average family size was slightly larger in Maine than the other two programs. The higher proportion of single individuals enrolled in HAS likely reflects the large student population, as described below.

4.4.3 Employment Status

As shown in Table 4-4, employment status at the time of joining differed significantly across the programs. SCHAP enrollees were all employed as was required to participate in the employer-based program, and close to 90 percent had full-time employment (again a requirement for eligibility). Three-fifths of MHP enrollees were not working when they joined the program compared to two-fifths for HAS. The most frequently reported reason for not working in both MHP and HAS was unemployment, followed by homemaker status. A significant proportion in both programs also reported being disabled, 14 percent in MHP and 11 percent in HAS, suggesting gaps in the availability of both public and private coverage for those with chronic health problems. Finally, 19 percent of HAS enrollees were students, apparently due to an outreach effort by the program to attract college students who were uninsured.

4.4.4 Income and Assets

Although all enrollees in the programs had income below 150 percent of the FPL, MHP only provided transitional insurance coverage to those with household income above 100 percent of the FPL. This is clearly reflected in Table 4-4, where about 84 percent of

Table 4-4

Demonstration Participants' Family Status

	Maine Health Program (n=437)	South Carolina Health Access Plan (N=338)	Washington Health Access Spokane (n=197)
Family Structure			
Percent married	56.3 %[a,b]	50.0 %[c]	40.0 %
Family size (mean)	2.8 [b]	2.5	2.4
Work status at time of enrollment			
Work status			
Full-time	15.3 %	89.0 %	26.8 %
Part-time	23.3	11.0	33.9
Not working	61.4	0.0	39.2
Reason for not working			
Homemaker	30.0		24.1
Unemployed/laid off	44.7		31.8
Retired	4.0		5.0
Disabled	14.3		10.8
Student	3.5		18.6
Other	3.5		9.7
Income and Assets			
Percent with income below poverty	83.8 [a,b]	39.7 [c]	51.7
Percent who:			
Own a car	80.8 [b]	85.3	87.7
Own their place of residence	42.8	48.6	47.7

NOTES:

[a] Refers to a significant difference at the 5% level between MHP and SCHAP, [b] between MHP and HAS, and [c] SCHAP and HAS using t-tests.

SOURCE: Medicaid Expansion Demonstration Household Survey.

MHP enrollees reported incomes below 100 percent of FPL, compared to 40 percent in SCHAP and 52 percent in HAS. Across the programs, the majority of enrollees owned a car (greater than 80 percent) as well as their place of residence (more than 40 percent). We might have expected to see lower levels of assets in Maine than in other two States, given the imposition of an asset test prior to joining MHP. It would appear, however, that home and car ownership was not appreciably lower in Maine.

4.5 Prior Insurance Experience of Enrollees

4.5.1 Coverage of the Previously Uninsured

The majority of individuals covered under the demonstration were either uninsured or enrolled in another publicly funded program at the time they joined the demonstration as indicated in Table 4-5. In Maine, 79 percent were previously uninsured and in South Carolina, 84 percent. Of those enrolled in HAS, 39 percent reported they were uninsured and 43 percent indicated they transferred from BHP.

Most individuals enrolled in the demonstration had no previous health insurance coverage because they could not afford it. Of the demonstration participants who were previously uninsured in Maine and Washington, the most important reason for lack of health insurance was because they were unemployed and obtaining coverage was very expensive--71 percent in Maine and 46 percent in Washington. In South Carolina, the most common response was because the employer did not offer health insurance followed by unemployment.

Table 4-5

Demonstration Participants: Health Insurance Prior To Enrollment

	Maine Health Program (n=436)	South Carolina Health Access Plan (n=330)	Washington Health Access Spokane (n=196)
Health insurance coverage prior to enrollment			
No insurance	79.2% [a,b]	84.2% [c]	38.8%
Private	13.6 [b]	10.0 [c]	8.1
Medicaid or Medical Assistance	2.9	0.3	3.0
Medicare	0.5	0.0	0.0
Champus	1.4	0.3	0.0
Other	2.5	5.2	7.1
Basic Health Plan	--	--	43.0
Reason for not having prior insurance			
Unemployed, too expensive	71.2	30.0	46.0
Employer offered, too expensive/not eligible	5.5	15.1	9.8
Employer didn't offer	16.8	44.9	36.0
Didn't need or want	1.8	5.6	0.0
Other	4.7	4.4	6.2

NOTES:
[a] Refers to a significant difference at the 5% level between MHP and SCHAP, [b] between MHP and HAS, and [c] between SCHAP and HAS.

SOURCE: Medicaid Expansion Demonstration Household Survey.

Very few individuals reported that they did not want health coverage; most wanted it but could not get it, primarily because they could not afford it.

This section provides a summary of the private insurance coverage and public program coverage of enrollees prior to joining the demonstrations. Information on enrollment in private plans is obtained from survey data and membership in publicly-funded programs from enrollment files.

4.5.2 Prior Private Insurance Coverage

A key question related to demonstration enrollment impacts is whether participants dropped existing private insurance coverage to join the demonstration program. Previous studies have estimated that about one-sixth of the decline in the percentage of children with private health insurance is because individuals drop expensive private coverage and enroll children in Medicaid (Cutler and Gruber, 1996; Dubay and Kennedy, 1997). This would suggest that expansion of Medicaid eligibility "crowds out" private insurance coverage. That is, individuals previously covered under private plans may opt for publicly-funded coverage and increase the financial burden on programs such as Medicaid, resulting in cost-shifting onto the public sector.

Survey results reveal that only a small percentage of enrollees reported having private insurance prior to joining the demonstration programs. The percentage with private coverage prior to joining the demonstration, as reported in Table 4-5, was 14 percent in Maine, 10 in South Carolina and 8 percent in Washington. It is very possible that although these individuals had some form of private insurance, they could have been underinsured and opted for better coverage under the demonstration. The analysis of enrollees in all three programs therefore does not provide evidence that private insurance coverage was significantly "crowded out" by the expansion of Medicaid eligibility under the demonstration.

4.5.3 Prior Participation in Public Programs

Table 4-6 provides information on participation in other public programs prior to enrollment in the demonstration. These data were obtained from administrative data maintained by the States and help us to understand the interface between the demonstration and other public programs, including Medicaid. The gap that occurs when a person loses other public coverage can help identify the percentage of individuals who may fall through the "cracks" and have no insurance coverage. These could potentially be individuals whose incomes increase to a level where they no longer qualify for Medicaid but are yet too poor to afford expensive private insurance coverage.

In Maine, 22 percent of the enrollees had some Medicaid experience prior to joining either the State or Federal demonstration. About 10 percent were in Medicaid the month before joining MHP. In SCHAP, although 14 percent of the enrollees had some Medicaid experience prior to joining SCHAP, only about 3 percent had been on Medicaid immediately before joining SCHAP. The remaining 12 percent had been on Medicaid in the past -- 8 percent 1 to 6 months previously and 4 percent 7 to 12 months prior to joining SCHAP. Therefore, in both Maine and South Carolina the majority of those with Medicaid experience

Table 4-6

Prior Enrollment in Publicly-Funded Programs

	Total		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Maine (MHP)						
Total number of enrollees age 20 or over	7,776		3,376		4,400	
Medicaid experience prior to initial enrollment*	1,702	21.9%	532	15.8%	1,170	26.6%
Months between Medicaid and initial demo experience						
0	749	9.6				
1-6	691	8.9				
7-12	262	3.4				
South Carolina (SCHAP)						
Total number of enrollees age 20 or over	1,541		718		823	
Medicaid experience prior to initial enrollment*	222	14.4	28	3.9	194	23.6
Months between Medicaid and initial demo experience						
0	43	2.8				
1-6	117	7.6				
7-12	62	4.0				
Washington (HAS)						
Total number of enrollees age 20 or over	2,849		1,011		1,838	
BHP experience prior to initial enrollment	1,995	7.0	699	69.1	1,296	70.5
Months in BHP before initial demo experience						
1	641	22.5				
2	739	25.9				
3-6	416	14.6				
7-12	116	4.1				
>13	83	2.9				

*In the past year prior to enrollment in demonstration.

SOURCE: Primary analysis of enrollment data for the Medicaid Expansion Demonstration.

had a lag between their Medicaid experience and enrollment in the demonstration. The higher percentage of Maine enrollees with Medicaid experience immediately prior to the demonstration is likely a function of the process of reviewing Medicaid denials for MHP eligibility.

In Washington State, the analysis focuses on BHP experience prior to joining HAS. This provides an estimate of the number of individuals who were enrolled in BHP prior to HAS. A large proportion, 70 percent, of the enrollees had some BHP experience prior to joining HAS. One explanation for this high percentage is that HAS enrollment was handled by BHP, and almost everyone who applied for HAS or BHP initially was screened for BHP eligibility, enrolled in BHP, and then transferred to HAS if found eligible. This is reflected by the fact that most were in BHP for only one or two months before enrolling in HAS. Only 7 percent of HAS enrollees had stayed in BHP longer than 6 months. Therefore, most of the HAS enrollees appear to have had limited BHP experience prior to joining HAS.

4.6 Average Length of Enrollment

Table 4-7 shows the average length of enrollment for enrollees overall and by age and gender. The average length of enrollment was 13-14 months across the three programs. Although the average length of enrollment did not differ substantially, the distribution of enrollees by length of enrollment did. As shown in Figure 4-2, the greatest proportion (more than 33 percent) of SCHAP and HAS members were enrolled for 1 to 6 months and the percentage of enrollees declines as the number of months of enrollment increases. In MHP, on the other hand, the highest percent of enrollees stayed in the program between 12 and 18

Table 4-7

Average Length of Enrollment (in months) During Medicaid Expansion Demonstration*

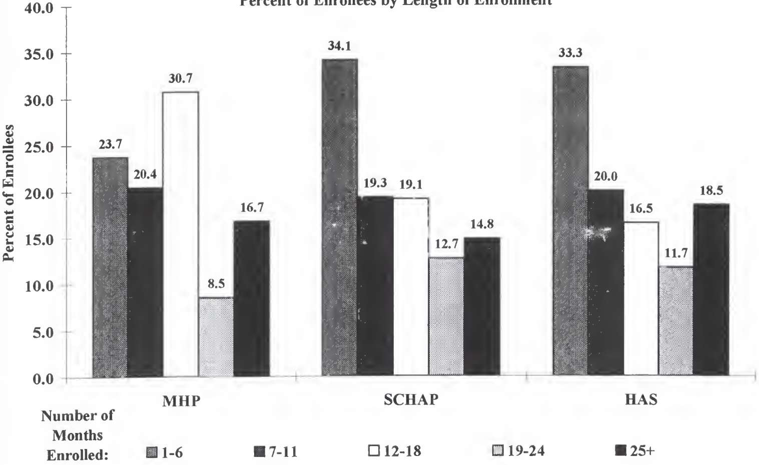
	Maine Health Program (N=7,776)	South Carolina Health Access Plan (N=1,541)	Washington Health Access Spokane (N=2,849)
All Enrollees	**14.0**	**12.9**	**13.4**
Age Group			
20-24	11.1	9.1	11.0
25-34	13.4	10.8	12.1
35-44	14.7	15.5	13.4
45-54	16.6	15.9	15.5
55-64	16.6	17.5	15.8
Gender			
Male	13.5	13.1	13.4
Female	14.4	12.6	13.4

* Includes enrollees who enrolled at age 20 or more.

SOURCE: Primary analysis of enrollment data for the Medicaid Expansion Demonstration.

Figure 4-2

Percent of Enrollees by Length of Enrollment



SOURCE: Primary analysis of enrollment data for the Medicaid Expansion Demonstration.

months. This could be a reflection of the reason for joining the program as discussed previously. MHP enrollees were most likely to join because of a current medical condition, and therefore, they may have had the greatest incentive to maintain their coverage.

A pattern that appears across all of the programs is that older enrollees stayed longer than younger enrollees. This is clearly shown in the average length of enrollment (Table 4-7) and in the proportion of enrollees continuously enrolled for 12 or more months (Figure 4-3). Older individuals may be more concerned with present and future health problems, while younger enrollees who are generally healthier may not have these same concerns. The difference in average months of enrollment between the youngest (20-24 years) and oldest (55-64 years) age groups was 8.4 months in SCHAP and about 5 months in both MHP and HAS. An explanation for this difference across the states could be the employer-based insurance coverage. Younger people may be more likely to switch jobs than older workers. There were no differences among males and females on average length of enrollment in each of the demonstrations.

4.7 Determinants of Enrollment and Disenrollment

The probability of enrolling in MHP and the probability of disenrolling from SCHAP are estimated to further understand the dynamics of the programs and the characteristics of individuals who enrolled or disenrolled. The analysis takes advantage of data collected in two rounds of telephone surveys with demonstration participants and nonparticipants (Maine) as well as disenrollees (South Carolina). The overall survey design is presented in Chapter 3.

4.7.1 Maine Enrollment Analysis

In Maine, the telephone survey was administered to both enrollees and a comparison group of uninsured Food Stamp recipients, all of whom had incomes below 100 percent of FPL. The comparison group, therefore, was potentially eligible to join MHP but did not join. Among the 213 individuals in the comparison group, 14 percent had heard of MHP and about 2 percent had submitted an application to the program. (These individuals were not enrolled in MHP either because they didn't complete the information requested or decided not to join.) Studying the differences between enrollees and those who were potentially eligible but not enrolled will help identify the type of individuals who choose to join programs such as MHP and similar programs that might be implemented in the future.

A logistic regression analysis was performed on the probability of enrolling in MHP to identify differences between the enrollee and comparison groups. The model controlled for demographic characteristics, family structure, employment status, and health status. Demographic variables included age, gender, race, and education. Family structure reflected marital status and family size. Multiple dimensions of health status were captured, because this was hypothesized to be the single most important factor in the decision to join or not to join. The health status indicators included overall perceived health status, the impact of health on physical activities, and the impact of physical health and mental health on social activities. The coefficients and odds ratios are reported in Table 4-8. An odds ratio greater than one indicates that the variable increases the probability of enrollment and conversely, a value less than one indicates a decrease in the probability.

Table 4-8

Probability of Enrolling in the Maine Health Program (MHP)

	Coefficients (Standard Errors)	Odds Ratios	Probability of Enrollment
Demographic Characteristics			
Age	0	1.00	
	(0.01)		
Gender (1=Male)	-0.19	0.83	
	(0.19)		
Race (1=White)	-1.08	0.34	
	(1.03)		
Education	0.08	1.08	
(1=High School Graduate or Higher)	(0.21)		
Marital Status (1=Married)	0.38 *	1.47	increase
	(0.25)		
Family Size	0.12	1.13	
	(0.09)		
Full-time Employment	0.06	1.06	
	(0.25)		
Part-time Employment	-0.18	0.84	
(unemployed omitted)	(0.23)		
Health Status Indicators			
Overall Health (omitted: Excellent)			
Very Good	-0.39	0.68	
	(0.30)		
Good	-0.48 **	0.62	decrease
	(0.30)		
Fair/Poor	0.40	1.49	
	(0.35)		
Health interferes with light activities	0.23	1.26	
	(0.30)		
Physical health interferes with social activities	-0.24	0.78	
	(0.24)		
Mental health interferes with social activities	0.40 **	1.49	increase
	(0.23)		
Other			
Intercept	1.91	6.74	
	(1.67)		
Neg. Log Likelihood	853.91		
Psuedo R-square	0.05		
Sample size	616		

* $p < 0.15$

** $p < 0.10$

*** $p < 0.05$

SOURCE: Medicaid Expansion Demonstration Household Survey.

In general, there were few characteristics that significantly differentiated enrollees from nonenrollees. Most significantly, those reporting mental health problems that interfere with their social activities had a 49 percent higher probability of enrolling in MHP. This is consistent with the case study findings that MHP enrollees were high users of mental health and substance abuse services. It might also indicate that those in need of these services were more likely to be referred to MHP by their health providers. As discussed earlier, 12 percent of MHP enrollees indicated a health provider as their referral source to the program. MHP may have experienced adverse selection as a result. Also, marital status was a determinant of enrollment and those who were married had a 47 percent greater probability of enrolling.

Finally, the logistic regression seems to indicate that those with good health compared to excellent health were less likely to enroll. Those with poor or fair health compared to excellent health have an odds ratio of 1.49, indicating increased probability of enrollment but this was not significant due to small sample sizes.

4.7.2 South Carolina Disenrollment Analysis

The South Carolina disenrollment analysis takes advantage of two waves of the telephone survey, one administered about 18 months into the demonstration and another a year later. Some of those who were enrolled in the first wave of the survey had disenrolled prior to the second wave of the survey. Of the 242 individuals interviewed in the two waves, 181 were still enrolled in SCHAP while the remaining 61 had disenrolled. This provided a natural experiment to analyze differences between SCHAP members who continued to receive coverage and those who had disenrolled. Identifying these differences is critical to understanding the dynamics of employer-based insurance and developing insurance programs that meet the needs of workers.

Disenrollees were asked why they were no longer enrolled in SCHAP. The reasons are as follows:

Total	**100.0%**
Employer/Spouse's employer offered insurance coverage	49.1
Ineligible for plan	34.2
Changed jobs	10.8
Left voluntarily	4.9
Employer dropped SCHAP coverage	1.0

A significant proportion left SCHAP because they received insurance through other sources but a large percent also lost coverage either because they became ineligible or changed jobs. About 11 percent were disenrolled because they left the employer participating in SCHAP and this clearly portrays the disadvantage of employer-based insurance which associates the coverage with employment and not the individual. Only a small number of individuals and employers dropped coverage, which indicates that most wanted the insurance coverage provided through SCHAP.

To further understand the pattern of disenrollment in a multivariate framework, we examined the influence of demographic characteristics, family structure, poverty status, employment status, and health status on the probability of disenrolling. Among the demographic variables included are age, gender, race, and education. Family structure variables reflect marital status and number of dependents. Poverty status (above/below poverty) is included to capture any income effects on disenrollment. Although all enrollees were employed during the first wave of the survey, an indicator of type of employment, full-time or part-time, was included to identify any differences between these groups of employees. A set of health status indicators, including measures to capture impact on also performing physical or social activities, were also included. Finally, a county indicator was included to capture geographic variations. The coefficients, standard error, and odds ratios are presented in Table 4-9.

The results indicate that none of the health status indicators and measures of functional status influenced disenrollment. Age, gender, race, income below FPL, and full-time employment also were not significant factors. The only variables that achieved statistical significance were marital status, number of dependents, and education level.

Individuals who were married had a lower probability of disenrollment and in addition, as the number of dependents increased, the probability of disenrollment decreased. This might indicate that the subscriber or employee valued the insurance coverage enjoyed by his/her family and therefore wished to continue to receive SCHAP benefits. This, therefore, suggests that employment decisions are influenced by the presence or absence of health coverage.

If the enrollee had a college degree then the probability of disenrollment increased by 93 percent. Those with higher levels of education are more likely to obtain higher paid employment that also offer health insurance or be promoted to positions that qualify the individuals for health insurance benefits or make them ineligible for SCHAP. The reasons provided for disenrolling from SCHAP among those surveyed support this conclusion.

Table 4-9

Probability of Disenrolling from the South Carolina Health Access Plan (SCHAP)

	Coefficients (Standard Errors)		Odds Ratios	Probability of Disenrollment
Demographic Characteristics				
Age	-0.01		0.99	
	(0.02)			
Gender (1=Male)	0.42		1.52	
	(0.37)			
Race (1=White)	0.41		1.50	
	(0.39)			
Education	0.66	*	1.93	increase
(1=High School Graduate or Higher)	(0.44)			
Marital Status (1=Married)	-0.70	**	0.50	decrease
	(0.37)			
Number of Dependents	-0.40	***	0.67	decrease
	(0.17)			
Federal Poverty Level (1=Below)	0.16		1.17	
	(0.36)			
Full-time Employment	-0.41		0.66	
	(0.57)			
Health Status Indicators				
Overall Health (omitted: Excellent)				
Very Good	0.24		1.27	
	(0.42)			
Good	-0.07		0.93	
	(0.48)			
Fair/Poor	-0.10		0.90	
	(0.70)			
Health interferes with light activities	-0.74		0.48	
	(1.33)			
Physical health interferes with social activities	0.53		1.70	
	(0.53)			
Mental health interferes with social activities	-0.11		0.90	
	(0.64)			
County (1=Horry)	-0.52		0.59	
	(0.49)			
Other				
Intercept	-0.96		0.38	
	(2.26)			
Neg. Log Likelihood	254.35			
Psuedo R-squared	0.08			
Sample size	223			

* p < 0.15, ** p < 0.10, *** p < 0.05

SOURCE: Medicaid Expansion Demonstration Household Survey.

5

Utilization and Costs in the Maine Health Program

This chapter assesses the utilization and cost experience in the Maine Health Program (MHP). This chapter has four sections. Section 5.1 describes our data and its development. Section 5.2 summarizes the utilization and cost experience, reporting not only the averages for the entire demonstration interval but also depicting the spending and use patterns over time. Section 5.3 uses multivariate methods to analyze and interpret those patterns. Finally, section 5.4 summarizes and discusses our findings.

5.1 Data and File Construction

MHP was administered by Maine Medicaid using the State's Medicaid Management Information System (MMIS). Thus, MHP's eligibility and claims data were maintained in the same data files as the State's Medicaid eligibility and claims data. Moreover, with the exception of the hospital payment reductions subsequently ordered by the Legislature (see below), MHP and Medicaid provider payment rates were the same.

In developing our analytic data file, we selected only those beneficiaries included in the State's MMIS who had been enrolled in the MHP adult program at some time during the Medicaid waiver. Thus, we excluded anyone who had only participated in the State program. Nor did we include anyone who had only been eligible for Medicaid.

in April 1994, hospital payments were reduced to nothing (i.e., MHP no longer covered any inpatient or other hospital-based care). Consistent with this understanding, we find that inpatient facility costs decreased from $50 in 1992 to $0 in 1995, that hospital outpatient department costs decreased from $26 in 1992 to $5 in 1995, and that emergency room costs decreased from $11 in 1992 to $0 in 1995.

Meanwhile, the nonhospital cost components were either reasonably stable or increased. For example, physician office costs increased from $18 in 1992 to $25 in 1995, and other, nonphysician professional costs increased from $9 in 1992 to $13 in 1995. The ancillary costs were basically stable over the four-year interval, and the mental health and substance abuse costs declined modestly, falling from $4 in 1992 to $3 in 1995. All of the physician service components indicate markedly higher costs in the first quarter of 1995, compared to the other three years in our data. For example, the total physician cost measure rises from $15 in 1994 to $19 in 1995.

The utilization and cost patterns over time are depicted graphically in Figures 5-1 through 5-7. With some exception, the utilization rates depicted in Figure 5-1 (physician services) and Table 5-2 (hospital services) are reasonably stable throughout the study interval. We find, however, that utilization "spikes" up in both March 1994 and March 1995. At both times, the program's survival was threatened, and enrollees no doubt anticipated that MHP benefits would not be available beyond that month — and they did so correctly in the latter instance. Thus, they reasonably shifted as many health care services as possible from future months into the anticipated last month of the program, so that the costs would be borne by

Figure 5-1
PMPM Physician Service Utilization Rates

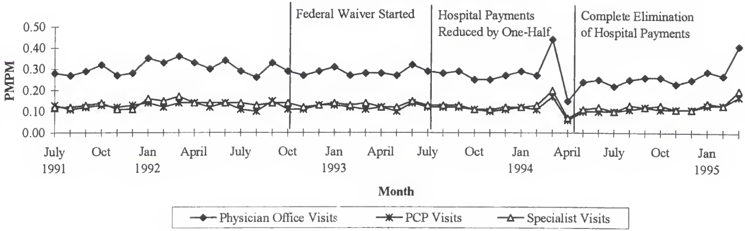


Figure 5-2
PMPM Hospital Utilization Rates

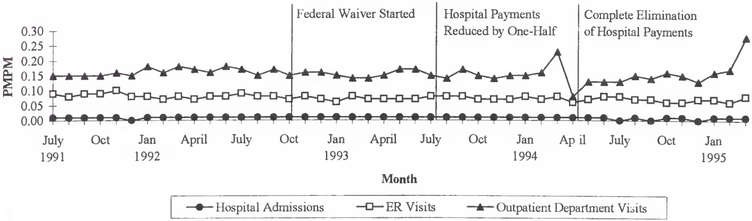


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Figure 5-3
PMPM Total and Inpatient Costs

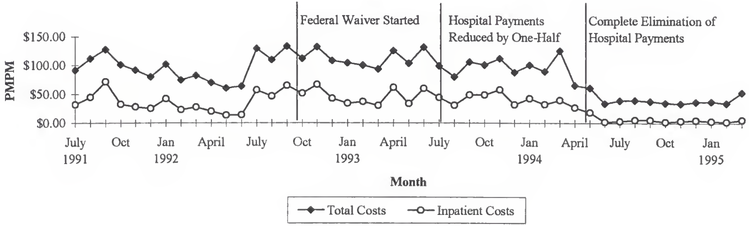


Figure 5-4
PMPM Inpatient Costs

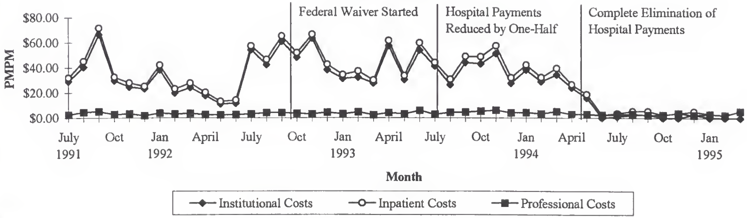


Figure 5-5
PMPM Ambulatory Care Costs by Setting

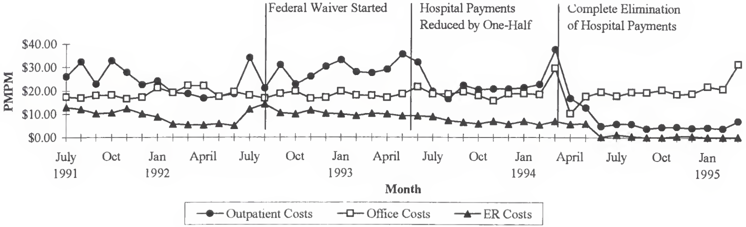


Figure 5-6
PMPM Professional Service Costs

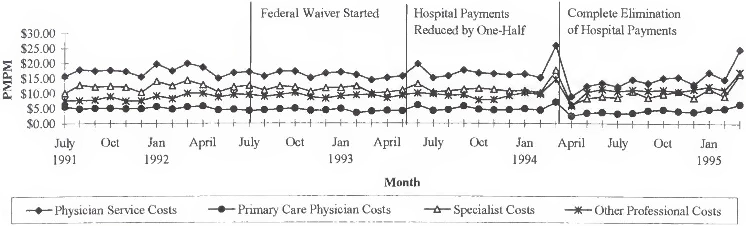
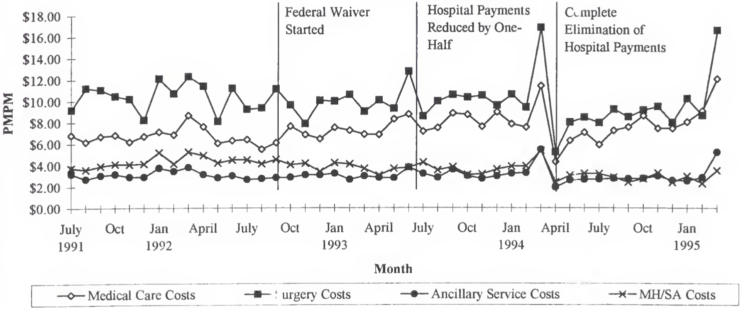


Figure 5-7
PMPM Costs by Service Type



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the program and not themselves. The latter spike no doubt accounts for the higher average utilization and cost rates noted above in 1995.

The chart of total PMPM costs in Figure 5-3 indicates a remarkably jagged pattern. However, as depicted from the charting of inpatient hospital costs in the same figure, it is reasonably clear that hospital cost variation largely accounts for the irregular pattern observed in the total cost aggregate. Apart from the sharp decline in hospital costs in 1994, when MHP stopped paying for hospital facility costs, we have no real understanding of why hospital spending varied so much in our data. Since the hospital admission rates do not indicate similar volatility, we must assume that the spending fluctuation largely reflects variation in length of stay and acuity. Indeed, our data indicate that the average length of stay was markedly higher in 1993, equal to 6.6 days in that year compared to 5.2 days in 1992 and 5.3 days in 1994. In 1995, when the hospitals were paid nothing for facility fees, the average length of stay was only 4.3 days. The other MHP cost aggregates depicted in Figures 5-4, 5-5, 5-6 and 5-7 basically mirror the utilization patterns already seen in Figures 5-1 and 5-2. In particular, for many of the nonhospital cost aggregates, we find that spending spikes up in March 1994 and March 1995. Also, in Figure 5-5, we observe the anticipated impact of hospital benefits reductions on outpatient department and emergency room costs. Although OPD and ER costs do not fall off to nothing, as we had anticipated, spending declines to only a small percentage of its former level.

5.3 Multivariate Analyses

The MHP utilization and cost patterns reported above are undeniably difficult to understand and interpret. Multivariate analysis was undertaken to model and explain those patterns, and thereby distinguish the programmatic and other factors responsible for them. Our multivariate analyses sought to answer four specific questions:

- What was the effect of converting MHP from a State-funded program to a Federally-funded one?
- What were the effects of the hospital payment reductions? Moreover, were substitution effects seen?
- What were the consequences of having three different enrollment processes? Were the three enrollment groups systematically different in terms of their utilization and costs?
- Was "pent-up" demand an important factor? Did the PMPM utilization and costs vary importantly with the duration or continuity of member enrollment?

No meaningful comparison or control group was available for purposes of this study. Ideally, one would have had similar information on the utilization and costs of otherwise similar individuals not enrolled in MHP.[5] If such information had been available, we could have evaluated the effects of MHP on not only health care utilization and costs, but also various measures of health care access and quality of care.

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[5] Many or most otherwise similar individuals without MHP would have paid out-of-pocket for health care services, because they had no health benefit plan whatsoever. Thus, no claims data were available for purposes of distinguishing their health care utilization and cost experience.

5.3.1 Model Specifications

Pooled cross section/time series models were estimated for each of the 21 utilization and cost variables. That is, each of these variables was included as a dependent or "left-hand-side variable" in estimating 21 different multiple regression models. The models were estimated on a PMPM basis, and we included as many member-months for each MHP enrollee as he or she was enrolled in the program (i.e., as many member-months as we had data and could measure the enrollee's health care use and costs). We estimated different model types and different parametric specifications. In exploratory analyses, we estimated linear, log-linear and two-part probit models. We found that the results obtained with all three were substantially similar. Due to the greater complexity of estimation and interpretation, we chose not to use the two-part probit in estimating the final models. The final *utilization* models were estimated as linear relationships and the final *cost* models were estimated as log-linear relationships.[6] We found that this estimation strategy gave somewhat more robust and consistent estimates across different model types and different dependent variables.

The regression models each included the same 13 independent or "right-hand-side" variables. Each of these variables is defined and discussed below.

Federal Waiver Status. The first variable is a "dummy" (i.e., a 0-1 or dichotomous) variable indicating federal waiver status. It was set equal to one for all member-months falling within the October 1992 through March 1995 interval when MHP was operated as a Federally-funded program. Otherwise, it was set equal to zero. Thus, the variable equaled zero for member-months falling within the July 1991 through September 1992 period when MHP was operated as an exclusively State-funded program. In our case study investigation, we had not been advised of any meaningful differences between the State and Federally-funded implementations of MHP. Thus, we had posited that MHP's conversion from a State to a Federally-funded program would have "no effect" on health care use and costs; and we merely included this variable in our modeling to validate that hypothesis.

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[6] We added $1.00 to the PMPM cost variables. This is a standard analytic stratagem for finessing the difficulty of calculating a logarithm of the legitimate zero values in our data.

Enrollment Groups. Two dummy variables were included to distinguish different enrollment groups. The first is a dummy variable identifying those enrolled through open enrollment (i.e., with initial enrollment during the February through July 1993 interval). The second is a dummy variable identifying those enrolled through review of Medicaid denials (i.e., with initial enrollment during the August 1993 through March 1995 interval). Rollovers from the State program were included as the omitted category. Although we did not have specific hypotheses, we anticipated that the characteristics of these three enrollment groups were different and wanted to test whether their utilization and cost experience was also different.

Hospital Payment Changes. In July 1993, hospital payments were reduced to one-half of the Medicaid payment rates; and in April 1994, hospital payments were reduced to nothing. Two dummy variables were included to indicate the interval when hospital payments were initially halved and then reduced to zero. By definition, these payment reductions would reduce hospital payment amounts, and we naturally anticipated that these variables would elicit negative coefficients in the hospital cost models. We were less certain, however, what the substitution effects would be, especially when the hospital payment rates were merely reduced. On the other hand, when hospitals were paid nothing, it seemed likely that they would be less willing to admit MHP members or care for them in their outpatient departments, and we hypothesized that the members would substitute office-based care (i.e., more office visits).

Continuity of Enrollment. Three variables were included to capture the impact of length and continuity of enrollment. The first is the number of months that the beneficiary was "continuously" eligible for either MHP or Medicaid, allowing no more than a one-month break in eligibility. This variable was included in order to test the importance of "pent-up" demand. We had anticipated that PMPM health care spending and use would begin at a high level during the initial months of enrollment and then decline with continued enrollment towards some long-run equilibrium as initial needs were met. Thus, we posited that monthly use and cost would vary inversely with the number of months of continuously eligibility. Although Medicaid months were not included in our modeling, we considered that Medicaid enrollment was a near-perfect substitute for MHP enrollment in terms of providing a mechanism for relieving pent-up demand and resolving unmet needs.

To allow for potential nonlinearity in the relationship, we also included the reciprocal of this variable. Although it is more common to indicate a "squared" term (e.g., squaring the number of months continuously eligible) in modeling nonlinear relationships, we found that the reciprocal specification gave consistently higher explanatory power.

Approximately 8 percent of the MHP enrollees had more than one enrollment segment. Thus, we also included a dummy variable identifying member-months in a second or third enrollment segment. If someone had been previously enrolled in MHP, we reasoned that his or her pent-up demand would already have been satisfied and that utilization and costs in a subsequent segment would be lower than otherwise expected, given the duration of enrollment. Thus, we anticipated that this variable would elicit a negative coefficient.

Gender. This is the first of several patient or member variables. It is a dummy variable set equal to one for females and set equal to zero for males (the omitted category). We hypothesized that similarly-aged females would use more services and therefore cost more than males. This is the usual finding in studies of health care demand.

Age. We hypothesized that health care use and cost would vary directly with age, given that health care problems become more prevalent and more serious as one grows older. Moreover, we included both age and its square to allow for a potential nonlinear relationship. Age is measured on a contemporaneous basis.

Physician Availability. This variable is the 1992 active patient care physician to population ratio for the county within which the member resides.[7] We anticipated that health care use and costs would be higher in those counties with relatively more physicians, due not only to improved access and greater provider willingness to accept MHP but possibly also due to "supply-induced" demand.

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[7] The county-specific values of this variable were obtained from the 1993 Area Resource File.

In exploratory analyses, we had also included as independent variables the short-term hospital bed to population ratio, per capita income, and population density. These variables, however, were so highly collinear with the physician-population ratio that we chose not to retain them in the final models.

Time. This variable measures elapsed time. It equals one for the first month in our data and is incremented by one in each subsequent month. In other words, this variable is a simple counter of the number of months from the beginning of the program when July 1991=1, through the end, where March 1995=44. This variable allows for a linear trend in the utilization and cost patterns (independent of any individual's length of enrollment). Although the payment rates for physician services did not change over the study interval, this trend factor should reflect, in part, the updates in payment rates for hospital and other services. Thus, we anticipated that our time variable would elicit a positive coefficient in many of the cost models. We had initially also included a squared term to allow for a nonlinear trend. However, this specification introduced significant multicollinearity with our program-related dummy variables (which are time-specific), and we thought it best to exclude it.

5.3.2 Results

The coefficient estimates and other results for all 21 regression models are reported in Appendix Table 5-1 (See Appendix A). The R-squares (i.e., percentage of variation explained) vary from just 0.2 percent in the hospital admissions model to 2.8 percent in the logarithm of total cost model. While these R-squares are extraordinarily small, by some standards, they are not unexpected given that we are modeling experience on a PMPM basis. With 143,170 member-months in our data, the estimated relationships are uniformly significant (using an F-test) at the 0.0001 level. Moreover, in all 21 models, one-half or more of the independent variables are significant (using the t-test) at the 0.05 level or better; and, in most instances, a majority of variables in the cost models are significant at the 0.0001 level. Consider now the pattern of coefficients estimated for the various independent variables or independent variable groupings.

Federal Waiver Status. Altogether contrary to expectations, our results indicate that the Federal waiver had the apparent effect of significantly decreasing both utilization and PMPM costs. With the exception of the admission model and the hospital-based cost models, the Federal waiver variable consistently elicited a highly significant, negative coefficient. Indeed, our coefficient estimate implies that the office visit rate was reduced by a quarter or more. We have no compelling explanation for this finding. We had been told that there were no important changes in either MHP benefits or administration. One possibility is that tighter utilization edits were imposed when MHP was converted from a State to a Federal program. On the other hand, it might simply be that utilization was artificially depressed through much of the waiver interval due to chronic program instability (see Chapter 2) and providers' persistent uncertainties about getting paid.

Enrollment Groups. Our results suggest that the three enrollment groups differed in their health risk profiles. We consistently obtained significant, negative coefficients for the "review" variable. This result signals that those enrolled through review of Medicaid denials were healthier and required less care than those "rolled over" from the State program. In fact, our coefficient estimate in the total cost model implies that the "review" enrollee group was as much as 20 percent less costly.

Although our results also indicate differences in utilization and cost patterns for the open enrollment group, we do not find that they are any more or less costly in the aggregate. Their significantly lower inpatient hospital and specialist costs rates are apparently offset by significantly higher costs for other, non-physician services.

Hospital Payment Changes. Our results suggest that the two payment changes — (1) the initial halving of hospital payment rates and (2) the subsequent elimination of hospital benefits altogether — not only had the expected effects on hospital-based use and costs but that they also had a striking impact on non-hospital care. Indeed, our results indicate that both payment changes had the effect of significantly reducing physician, ancillary, and other professional use and costs. There is but one exception; we find that the costs of mental health and substance abuse treatment were not impacted by the initial payment reduction. Nevertheless, we do obtain a significant, negative coefficient when hospital payments were reduced to nothing. In general, the coefficient estimates for this variable are four or five times as large (in absolute value) as the values obtained for the dummy variable indicating the interval when payments were halved.

How do we explain this finding? It is altogether contrary to our hypothesis that more ambulatory care would be substituted for hospital care and therefore that ambulatory care costs and use would increase. At the time that the payment reductions were made, the entire program was also at risk and both members and providers were confused about its status; and it's just possible that some providers were misinformed about the benefit reductions. It is also possible that hospital-based medical groups, of which there are many in Maine, mistakenly believed that the hospital benefit reductions also applied to professional services delivered in a hospital environment. In any event, this is a real conundrum, and we have not found a fully satisfactory and verifiable explanation.

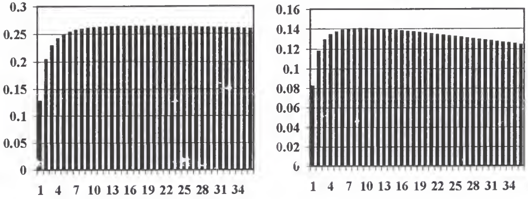
Turning now to hospital-based ambulatory care, we find that both payment reductions were associated with significantly lower outpatient department use and costs, consistent with the other ambulatory care results. The emergency room results, however, are quite different. Quite surprisingly, we find that the halving of hospital payment rates was associated with a significant increase in emergency room use and costs. This tends to suggest that the initial hospital payment reduction created an access problem that was resolved in part through greater reliance on the hospital emergency room. This is neither a desirable or appropriate substitution. Although we do not find a similar impact when hospital benefits were eliminated altogether, this could be a spurious result. When nothing is paid, the hospitals have no incentive to submit a claim. Thus, emergency room use might have increased and it would not have been observed in our claims data.

Continuity of Enrollment. Our measures of continuous enrollment were included to evaluate or test the importance of the *pent-up demand hypothesis* — namely, the proposition that health care use and costs would be abnormally high in the early months of enrollment due to the necessity of treating patients for previously unmet needs (i.e., health care needs that had been deferred due to lack of health insurance). Our findings decisively reject that hypothesis. With the sole exception of inpatient hospitalization, we find instead that health care utilization and costs are actually much lower in the initial months of enrollment. Most probably, this reflects the practical delays involved in scheduling appointments and otherwise accessing the health care system.

Although the coefficient estimates for the continuity of enrollment variables are reported in Appendix Table 5-1, it is not easy to test the pent-up demand hypothesis from merely looking at the coefficient values. Thus, to better understand the relationship between each dependent variable and the number of months continuously enrolled, we have used the coefficient estimates to graphically depict or simulate the nonlinear relationships implied by the coefficient estimates over a 36-month interval (see Figures 5-8 and 5-9).

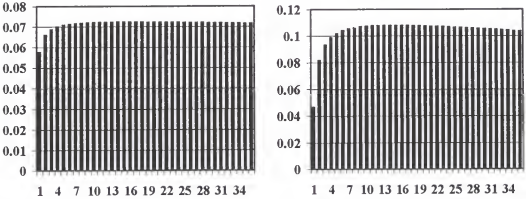
Consider first, in Figure 5-8A, the simulation of the relationship between the physician office visit rate and months enrolled. In month one, the projected office visit rate is only 0.13 visits per month. However, the visit rate rises rapidly to 0.26 visits per month by month 7 and basically plateaus at that level for the remainder of the 36-month interval.

Figure 5-8
Per Member Per Month (PMPM) Utilization
by Months Continuously Enrolled



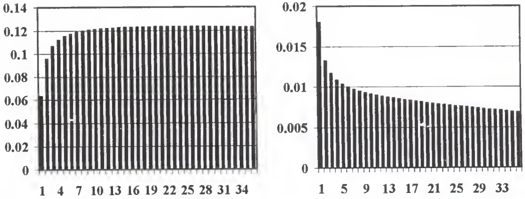
A. Physician Office Visit Rate

B. Outpatient Department Visit Rate



C. Emergency Room Visit Rate

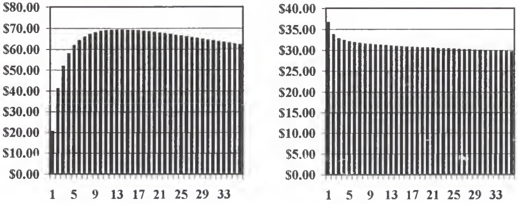
D. Primary Care Physician Visit Rate



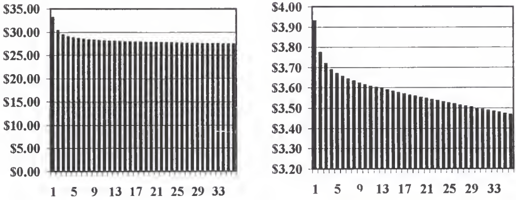
E. Specialty Care Physician Visit Rate

F. Hospital Admission Rate

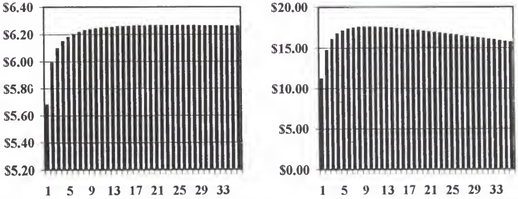
Figure 5-9
Per Member Per Month (PMPM) Costs
by Months Continuously Enrolled


A. Total Costs

B. Inpatient Costs

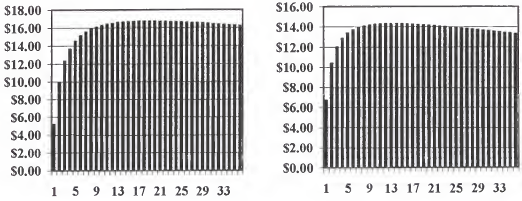

C. Inpatient Facility Costs

D. Inpatient Professional Costs


E. Emergency Care Costs

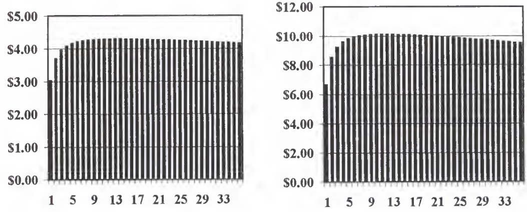
F. Outpatient Department Costs

Figure 5-9 (continued)
Per Member Per Month (PMPM) Costs by Months Continuously Enrolled



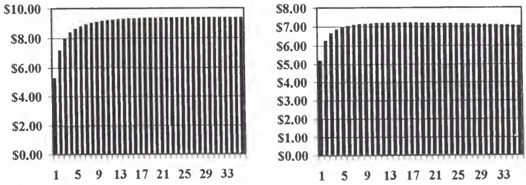
G. Office Visit Costs

H. Physician Service Costs



I. Primary Care Physician Costs

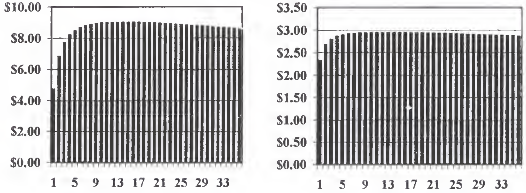
J. Specialty Care Physician Costs



K. Other Professional Costs

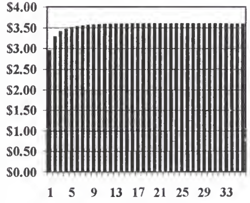
L. Medical Care Costs

Figure 5-9 (continued)
Per Member Per Month (PMPM) Costs by Months Continuously Enrolled



M. Surgery Costs

N. Ancillary Service Costs



O. Mental Health/Substance Abuse Costs

Except for the hospital admissions simulation in Figure 5-8F and the inpatient cost simulations in Figures 5-9B, 5-9C and 5-9D, the other simulation graphs indicate much the same pattern. For these four hospital models only, we find evidence of pent-up demand. The hospital admission rate begins at 0.0018 admissions per month in month one, declines to 0.0010 by month five and continues to decline gradually to 0.007 in month 36. Although the decline is not so sharp, the three inpatient cost models indicate a similar, monotonic reduction over the 36-month interval of simulation.

Although the inpatient hospital results could be taken as evidence of pent-up demand, we suspect that our findings are simply an artifact of the MHP enrollment process. In conducting site visit interviews, it was frequently alleged that hospitals were enrolling patients already admitted in order to get their bills paid. Our results are certainly consistent with that scenario. It seems improbable that there could be any other explanation for so high a rate of hospital admission during the initial month of enrollment. Hospital admissions could not possibly have been scheduled on such short notice.

As seen in Figure 5-9A, total MHP costs follow much the same pattern as physician office visits. The projected costs begin at $20 per month in month one, rise to $69 in month 11 and then decline gradually to $62 in month 36. Many of the cost variables follow a similar pattern, with costs rising and peaking toward the end of the first year and then declining gradually through the remainder of the 36-month interval. The outpatient department visit rate also follows this pattern (Figure 5-8B).

Recall that one of our enrollment continuity variables distinguishes a second or third enrollment segment. Again, this variable was included to control for potential dissipation of pent-up demand in a prior enrollment episode. Since no real evidence of pent-up demand was found, this interpretation is perhaps no longer appropriate. More probably, this variable proxies the differential characteristics and health risk profile of those who re-enroll in MHP. Our results indicate that this re-enrollment cohort used significantly more physician office and emergency room visits and also incurred significantly higher costs for ancillary services and surgery. On the other hand, we find that this group incurred significantly lower costs for mental health and substance abuse services. However, no difference in total costs (i.e., aggregating over all services) is seen.

Gender. The results obtained for this variable are very much as expected. In general, we find that females had significantly higher use and costs. We have only three exceptions in our data. In particular, our results indicate that the hospital admission rates, inpatient facility costs, and emergency room costs were significantly lower for women.[8] No significant differences were seen, however, in either the inpatient professional, total inpatient costs, or the emergency room visit rate.

Age. The results obtained with the age and age-squared variables were uniformly consistent with expectations. At least one of the two age variables is significant in each of the regression models, and the results consistently indicate that use or cost varies directly with age. Since the age relationship was not an explicit study interest, we do not further explore or depict the nonlinear patterns in the different models.

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[8] Although the hospital admission result is seemingly inconsistent with the literature, one must remember that MHP did not cover obstetrics and that obstetric and related admissions would have been paid by Medicaid.

Physician Availability. The physician-to-population ratio consistently elicits a positive, highly significant coefficient in all use sand cost models. Although this variable may also be proxying other market characteristics (e.g., urbanicity), the results nevertheless support a finding that the physician supply had a pervasive and extremely important impact on program utilization and cost.

Nevertheless, since the physician supply would not have varied meaningfully over the study interval, this variable can not explain any of the temporal patterns in use and cost.

The physician-population ratio variable is insignificant only in the medical care cost model; and this result is potentially intriguing. Since those living in areas with a higher physician-to-population ratio were found to receive significantly more physician visits, a null finding in the medical care cost model could suggest that those patients receive fewer medical services (or less intense services) on a per-visit basis. Conversely, in areas with limited provider availability, providers may compensate by providing more medical services when a patient is seen. While this finding is undeniably provocative and should give strong impetus to additional research, the reader is nevertheless reminded that the other cost aggregates in our data do not indicate the same pattern.

Time. With the exception of emergency room visits and costs, and inpatient facility costs, we found that all utilization and cost measures vary directly with elapsed time. Although the cost measures reflect both volume and price effects, the utilization measures naturally reflect only volume effects. Thus, the utilization results indicate that more services were provided on a per member, per month basis over time. Moreover, since we controlled independently for duration of enrollment, this effect is seemingly independent of enrollment eligibility patterns.

5.4 Summary and Discussion

We now review the four specific questions that this multivariate study addressed and summarize our findings.

What was the effect of converting MHP from a State-funded program to a Federally-funded one? Our results consistently indicate that the Federal waiver substantially decreased both health care utilization and expense. Since we had not expected to find any effect, we can only suggest that program instability, and persistent questions being asked about whether or not it would be continued, impeded full utilization of benefits.

What were the effects of the hospital payment reductions? Moreover, were substitution effects seen? We found that the hospital payment reductions not only reduced hospital use and costs but also, surprisingly, they reduced most categories of nonhospital use and cost. While the mechanism of such "spillover" impact is not clear, our results should give caution to those contemplating major benefit changes.

What were the consequences of having three different enrollment processes? Were the three enrollment groups different in terms of their utilization and costs? Our results clearly show that different enrollment processes yield enrollees with different risk profiles. Those "rolled over" from the preexisting State program were found to be significantly more expensive. Many of the "rollovers" had evidently been enrolled with the assistance of hospital and other providers in order to get bills paid.

Was "pent-up" demand an important factor? Did the PMPM utilization and costs vary importantly with the duration or continuity of member enrollment? Based on our findings, we can decisively reject the pent-up demand hypothesis. We do not find extraordinarily high utilization and costs during the initial months of enrollment. On the contrary, we find that health care utilization and expense are actually considerably lower initially and then ramp up in orderly fashion to a peak or plateau after a year or more. In some instances, the health care use or cost declines modestly after reaching a peak, but this longer-run pattern can not be taken as evidence of pent-up demand as it is usually understood.

The answers to these questions are clearly helpful in explaining the irregular utilization and cost patterns reported in our descriptive analysis. However, the multivariate analysis has raised as many questions as it has answered. On balance, we must conclude that the severe programmatic instability, which persisted throughout the entire demonstration, made it extraordinarily challenging to evaluate and understand MHP's utilization and cost experience.

6

Utilization and Costs in the South Carolina Health Access Plan

The South Carolina Health Access Plan (SCHAP) provided Medicaid-like coverage to low-income working uninsured individuals and their families. The major difference in service delivery between the SCHAP program and traditional Medicaid was that the SCHAP program adopted a primary care case management (PCCM) program Under the PCCM program, primary care physicians served as gatekeepers or Primary Care Coordinators (PCCs) who were responsible for coordinating all aspects of their patient's care. They were paid a case management fee of $4.00 per member per month for SCHAP enrollees.

This chapter analyzes the utilization and cost experience of adults enrolled in the SCHAP program. The analyses focus on the following research questions:

1. What were the annual utilization and cost patterns of adults enrolled in the SCHAP program, in the aggregate and by type of service?
2. Was there evidence of pent-up demand among SCHAP enrollees? What was the impact of length of enrollment on utilization and costs?
3. To what extent did the patterns of utilization and cost of SCHAP enrollees differ from those observed for traditional Medicaid beneficiaries, such as AFDC and disabled adults? Did the PCCM program have any impact on the utilization and cost patterns of the SCHAP program?

Table 6-1

Utilization by Demonstration Year For SCHAP Adults (age 18 and over)

Utilization Measures	All Years[1]	Years 1[2]	Year 2[3]	Year 3[4]
Inpatient admissions (per 100 enrollee years)				
Number of admissions	8.8	11.3	8.5	8.4
Number of days	33.6	42.6	28.7	35.5
Ambulatory use (per enrollee year)				
Number of emergency room visits	0.41	0.30	0.42	0.42
Number of office visits	3.28	2.95	3.34	3.31
Costs Per Member Per Month (PMPM)	$78.82	$68.44	$74.50	$85.19
(PMPM excluding outliers)	(73.13)[5]		(67.45)[6]	(79.22)[7]

[1] All Years: 2/93 - 12/95

[2] Year 1: 2/93 - 1/94

[3] Year 2: 2/94 - 1/95

[4] Year 3: 2/95 - 12/95

[5] Excludes the outliers from Year 2 and Year 3.

[6] Excludes one person with two expensive months, $19,342 and $35,174.

[7] Excludes one PMPM of $53,077.

SOURCE: South Carolina Medicaid claims and enrollment files, 1993 - 1995.

Average Cost by Demonstration Year. The PMPM for the SCHAP program increased over the three-year period (Table 6-1). The PMPM was $68.44 in the first year of the demonstration, and it increased to $74.85 in the second year and $85.19 in the third year. The three-year average was $78.82 per member per month.

The increasing PMPM trend resulted in part from a few expensive hospital admissions in the second and third years. In the first year of the demonstration, there were no inpatient admissions exceeding $7,000 per admission while there were 3 admissions exceeding $15,000 in each subsequent year.

The PMPM decreased substantially after excluding two expensive enrollees. For instance, the PMPM in the second year was reduced from $74.85 to $67.45 after excluding an enrollee with two expensive inpatient admissions. The PMPM in the third year was reduced from $85.19 to $79.22 by excluding one enrollee with one expensive month. Even though the hospital admission rate decreased over time, as discussed in the previous section, there were several expensive inpatient admissions which drove up the PMPMs in the second and third years.

This result demonstrates how a few expensive enrollees can have substantial impacts on the cost and volatility of a small insurance pool, such as the SCHAP program. According to the SCHAP final report issued by the State, the SCHAP program was never in danger of a deficit because of these few "high cost" individuals. SCHAP administrators believe that SCHAP demonstrated a successful example of spreading risks in a small insurance pool. Nevertheless, we observed the significant impact of a few high-cost enrollees on SCHAP's per member per month costs.

Pent-up Demand. The evidence for pent-up demand among SCHAP enrollees is relatively weak. We analyzed utilization patterns in the first year of enrollment for enrollees who were continuously enrolled in SCHAP for 12 months or more. If there were a simple form of pent-up demand, consistent across enrollees, more than one-quarter of the 12-month utilization experience would occur in the first three months of enrollment. As shown in Table 6-2, only one utilization measure -- the number of office visits -- slightly exhibited a disproportionate level of use in the first quarter. For inpatient services (measured in terms of hospital admissions and hospital days), less than one-quarter of the first year utilization occurred in the first three months. Likewise, the number of emergency room visits was less than the quarterly average.

Although we did not observe pent-up demand based on this descriptive analysis, utilization in the first quarter of enrollment may not be long enough to assess pent-up demand. For example, care may be delayed due to appointment waits or as a result of a "learning curve" on how to access care. In the next section, we present a more rigorous test of pent-up demand based on a multivariate analysis which examines the relationship between length of enrollment and use of services.

Table 6-2

Utilization During the First Quarter and the First Year of Enrollment for SCHAP Members Who Were Continuously Enrolled for Twelve Months or More[1] (February 1993 - December 1995)

Utilization Measures	First Quarter of Enrollment[2] (results per enrollee quarter)	First Year of Enrollment[2] (results per enrollee year)	Percent of Utilization in First Quarter
Inpatient Admissions			
Number of admissions	1.4	9.4	14.9%
Number of days	5.4	39.0	13.8
Outpatient Visits			
Number of emergency room visits	0.07	0.34	20.6
Number of office visits	0.89	3.26	27.3

NOTES:

[1] The utilization data in this table are only for enrollees who were continuously enrolled for twelve months or more, allowing a one month break. Note that the data measure utilization in terms of how long the enrollee is enrolled, not in terms of how long the demonstration has been operating.

[2] The measures of utilization in this table refer to visits, stays, or days per enrollee quarter or per enrollee year, as applicable. This measure is calculated by totaling the number of visits, stays, or days for the period, dividing by the total number of enrollee months for the period, and multiplying by three or twelve, as applicable. Inpatient admissions and days are measured per 100 enrollee quarters or years, as applicable.

SOURCE: South Carolina Medicaid claims and enrollment files, 1993 - 1995.

6.2.2 Multivariate Analysis

A more rigorous assessment of utilization patterns, pent-up demand, and the impact of length of enrollment of SCHAP enrollees was performed through multivariate analysis. The analysis used a quarterly utilization file. A small percentage of SCHAP members (3.5%) enrolled in the SCHAP program more than once. In multivariate analyses, we included utilization during the first enrollment period for those who had interruptions in SCHAP enrollment, because utilization patterns may be different during subsequent enrollment periods.

Logistic regression analysis was performed to examine the probability of utilization among SCHAP members, including inpatient admissions, ambulatory visits[4], emergency room visits, physician visits[5], primary care provider visits, and specialist visits. The independent variables include age and age-squared to capture the hypothesized non-linear relationship between age and use; gender; race (white versus non-white); income (below or above 100% FPL); county of residence (Horry versus other); year dummies for 1994 and 1995 (1993 omitted) to capture the year trend, all other things being equal; season dummies for spring, summer and fall (winter omitted) to control for seasonal variation in use; and a quarter counter and the squared term of the quarter counter. The quarter counter indicates the number of cumulative quarters for each person enrolled in the SCHAP program. The quarter counter was used to examine the relationship between length of enrollment and use of health care services. Because we hypothesized a non-linear relationship between length of enrollment and probability of use, we included the squared term for quarter. The logistic regressions are presented in Appendix Table 6-1. (See Appendix A.)

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[4] Ambulatory visits include outpatient visits, ER visits, and physician visits.

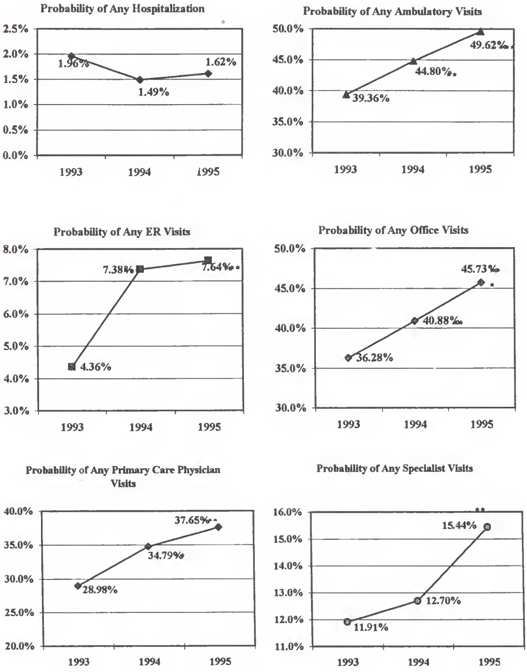
[5] Physician visits were decomposed into primary care provider visits and specialist visits.

Utilization by Demonstration Year. First, we examined utilization patterns by year for SCHAP enrollees. Figure 6-1 displays the estimated probabilities of quarterly utilization by year during the first three years of the SCHAP program (February 1993 to December 1995). The probabilities by year were estimated based on the logit analyses; all the control variables were evaluated at the means.

For inpatient admissions, there were no statistically significant differences in the probability of having one or more hospitalizations during 1993, 1994, and 1995. The estimated probabilities of having a hospitalization were 2.0 percent, 1.5 percent and 1.6 percent in an average quarter, respectively.

For all ambulatory care utilization measures, the likelihood of using outpatient services or office visits in a quarter increased over the three-year period for SCHAP enrollees. For example, the probability of having any ambulatory visits was 39.4 percent in 1993, while the probability increased significantly in 1994 (44.8%) and 1995 (49.6%). The probability of having any ER visits was 4.4 percent in 1993, while the likelihood was significantly higher in 1994 (7.4%) and 1995 (7.6%). A similar trend was found for the probability of any office visits in a quarter -- the likelihood was 36.3 percent, and it significantly increased in 1994 (40.9%) and 1995 (49.6%).

Figure 6-1
Probability of Quarterly Utilization by Year by Type of Service for SCHAP Adults



- p<0.1

** p<0.05 NOTE: The significant levels of 1994 and 1995 are compared with 1993.

*** p<0.01 SOURCE: South Carolina Medicaid claims and enrollment files, 1993 - 1995.

The multivariate results reveal that SCHAP enrollees were more likely to have an outpatient or office visit in 1994 and 1995, as compared to the first year of the SCHAP program. The low outpatient utilization rates in the first year of the SCHAP demonstration may reflect the management of the SCHAP program. Case study interviews revealed that SCHAP staff closely monitored utilization and costs and educated SCHAP enrollees how to use health services appropriately. They were concerned that high costs would threaten the fiscal viability of the demonstration program. After the first year, the SCHAP demonstration was more established, and program management might have been less vigilant. Additionally, anecdotal evidence suggests that staff priorities may have shifted after the first year.

Higher use in the second year also may reflect unmet needs due to the tight program management in the first year. Consequently, SCHAP enrollees may have been more likely to seek care in the later years of the demonstration as a result of their unmet needs. Indeed, as we shall see in Chapter 8, the level of unmet need decreased over time for those continuously enrolled in SCHAP.

Finally, no significant difference in the probability of hospitalization between years suggests that the SCHAP program management did not affect the use of inpatient services, which are less discretionary.

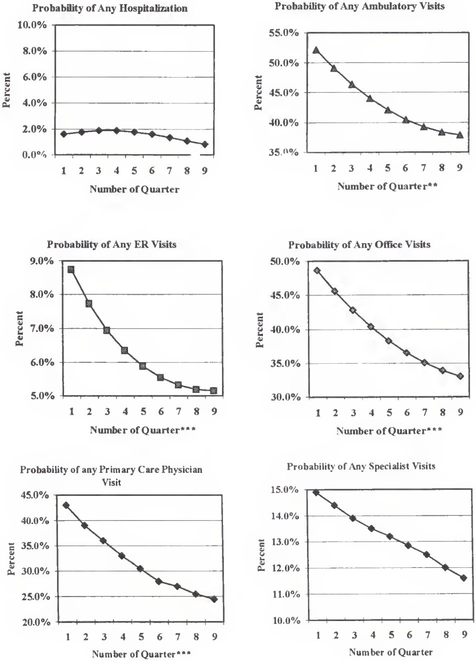
Utilization by Length of Enrollment. Based on the multivariate analysis, we also examined the impact of length of enrollment on utilization. Length of enrollment was measured by a quarter counter which indicates the number of cumulative quarters for each person in SCHAP. We estimated the probabilities of utilization by length of enrollment for an average SCHAP adult enrollee based on the logit analyses.

Figure 6-2 presents the estimated probabilities of utilization by length of enrollment for different types of services for an average SCHAP adult enrollee. For inpatient admissions, the quarter counter variable did not significantly affect the probability of having a hospitalization. Again, this result may reflect the non-discretionary nature of inpatient admissions (Andersen and Newman, 1973). The use of inpatient admissions is more likely to be affected by the need for services, rather than by how long an individual was in a health plan. This result also supports the finding that there was no pent-up demand in inpatient utilization as discussed previously.

There is an inverse relationship between length of enrollment and all of the ambulatory care utilization measures. The probabilities of service use significantly decreased with the number of quarters enrolled in the SCHAP program. For instance, the probability of having an ambulatory visit was 0.52 in the first quarter of enrollment. By the eighth quarter, the probability of any ambulatory visits decreased to 0.38. For office visits, in the first quarter of enrollment, the probability of having an office visit was 0.49, while it was 0.34 in the eighth quarter. Similar patterns were found for the probabilities of emergency room visits, specialist visits, and visits to primary care providers.

The results suggest that the probability of outpatient utilization decreased with the number of quarters in SCHAP, while the probability of hospitalization was not affected by length of enrollment. We did not observe a dramatic decrease in utilization that would be indicative of pent-up demand. Instead, we observed a gradual reduction in the use of ambulatory services. Whether this can be considered pent-up demand is debatable, given the gradual tapering of utilization as length of enrollment increased.

Figure 6-2
Probability of Utilization by Length of Enrollment by Type of Service for SCHAP Adults



* $p<0.1$

** $p<0.05$

*** $p<0.01$ SOURCE: South Carolina Medicaid claims and enrollment files, 1993 - 1995.

6.3 Utilization and Costs among SCHAP, AFDC and Disabled Adults

To learn more about the costs and utilization patterns of the SCHAP population within the framework of a traditional Medicaid program, we compared the utilization and costs of medical care of SCHAP demonstration participants with two Medicaid comparison groups – AFDC adults and disabled adults. For the purpose of this analysis, Medicaid beneficiaries in the two comparison groups were selected based on age (18-64), categories of eligibility (AFDC or disabled), and date of initial enrollment (February 1993 to December 1995). We hypothesized SCHAP costs would be lower, although the magnitude of the differential was unknown. We also were uncertain about the magnitude of cost differentials when disaggregated by type of service. Such information is critical in designing future insurance programs for low-income uninsured populations, especially those who are working

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6.3.1 Descriptive Analysis

PMPM Among SCHAP, AFDC and Disabled Adults. First, we examined the PMPMs and utilization measures among SCHAP, AFDC and disabled adults. As mentioned previously, maternity care was excluded in the utilization and cost analyses. We aggregated the costs of medical care from Medicaid claims to compare the PMPM of SCHAP enrollees to that of the AFDC and disabled groups over the study period (February 1993 to December 1995). Because the age-gender distributions were significantly different among these three groups, we calculated age-gender adjusted PMPMs for the AFDC and disabled groups using the age-gender distribution of SCHAP enrollees. The PMPM was decomposed into four main categories including inpatient facility, outpatient facility, professional services, and prescription drugs. Further decomposition was performed for the categories of outpatient and professional services.

Table 6-3 and Figure 6-3 present the unadjusted and age-gender adjusted PMPMs by type of service among the SCHAP, AFDC, and disabled groups. As would be expected, in both the adjusted and unadjusted comparisons, the disabled group was the most expensive in terms of total PMPM, followed by the AFDC group, and finally the SCHAP group. The total PMPMs, adjusting for age and gender, were $388 for the disabled group, $212 for the AFDC group, and $79 for SCHAP members. The SCHAP group also had the lowest adjusted costs for inpatient care, outpatient care, and professional services. For example, for the adjusted cost of inpatient care, the disabled group ($205) was about eight times higher and the AFDC group ($125) was nearly five times higher than the SCHAP group ($26). For the adjusted cost of professional services, the disabled group ($109) was four times higher and the AFDC group ($54) was two times higher than the SCHAP group ($27). Regarding the cost of prescription drugs, the disabled group was the most expensive ($55), followed by SCHAP and AFDC ($16 each).

While having the lowest PMPM cost of physician services among the three groups, the SCHAP group had the highest PMPM cost of primary care visits ($5.39), as compared to the AFDC ($4.18) and disabled ($4.46) groups. On the other hand, the SCHAP group had lower costs of specialist care ($4.77) than the AFDC and disabled groups ($6.74 and $13.52).

Table 6-3

Comparison of Per Member Per Month (PMPM) Costs[1] for SCHAP, AFDC, and Disabled Adults (Age 18 and over)

	Unadjusted			Age-Gender Adjusted		
	SCHAP	AFDC	Disabled	SCHAP	AFDC	Disabled
Inpatient Hospital Facility	$26.30	$49.45	$207.85	$26.30	$125.04	$205.02
Outpatient Hospital Facility	8.80	14.56	19.65	8.80	16.71	18.09
Emergency room visits	1.35	3.61	2.97	1.35	3.43	3.42
Other outpatient hospital	7.45	10.95	16.69	7.45	12.27	14.67
Professional Services	27.28	44.38	110.86	27.28	54.44	109.31
Inpatient hospital	4.18	9.80	22.16	4.18	15.21	19.31
Outpatient hospital	5.49	8.02	11.34	5.49	10.30	10.38
Office-based physicians	10.16	11.27	21.63	10.16	10.92	17.98
Primary care providers	5.39	3.42	5.10	5.39	4.18	4.46
Specialists	4.77	7.85	16.53	4.77	6.74	13.52
Clinics	3.29	4.21	5.79	3.29	3.38	4.65
Ancillary services[2]	4.16	11.08	49.94	4.16	14.63	56.98
SCHAP case management	3.18	N/A	N/A	3.18	N/A	N/A
Prescription Drugs	16.44	13.09	55.98	16.44	16.05	55.14
Total PMPM	78.83	121.44	394.25	78.83	212.24	387.56

N/A = Not applicable.

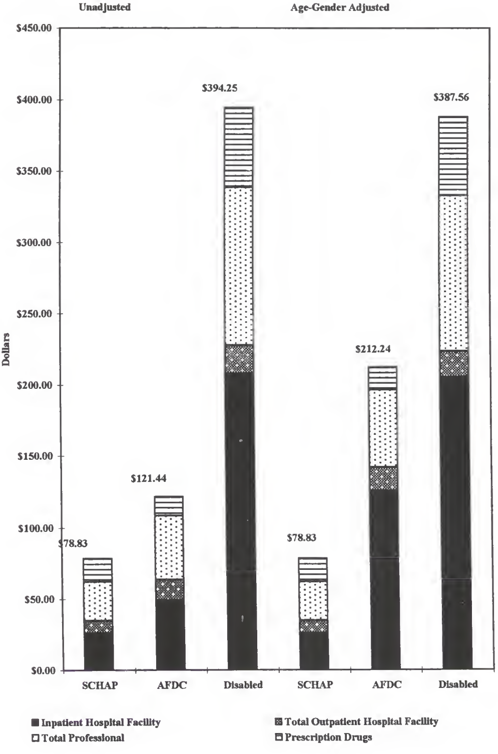
NOTES:

[1] Excludes maternity care. Some numbers may not add up due to rounding errors.

[2] Includes other professionals, lab, x-ray and DME costs.

SOURCE: South Carolina Medicaid claims and enrollment files, 1993 - 1995.

Figure 6-3
Per Member Per Month Costs for SCHAP Adults



SOURCE: South Carolina Medicaid claims and enrollment files, 1993 - 1995.

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There are two possible reasons for the higher PMPM costs of primary care providers and lower PMPM costs of specialist care. First, SCHAP members may have lower needs for specialist care due to favorable health status. Second, these results may be attributable to SCHAP's primary care case management (PCCM) program. Under the PCCM program, SCHAP beneficiaries were required to select a Primary Care Coordinator (PCC) who was responsible for coordinating all aspects of a member's care. The PCCM program seems to have provided better access to primary care providers for SCHAP enrollees, as demonstrated by the higher PMPM costs of primary care providers.

In summary, these results indicate that SCHAP enrollees -- that is, the working uninsured -- were considerably less costly than the two Medicaid comparison groups. Excluding maternity care, the PMPM of SCHAP adult enrollees was $179 less than the disabled group and $99 less than the AFDC group, after adjusting for age and gender.

Utilization Among SCHAP, AFDC, and Disabled Groups. Table 6-4 displays the unadjusted and age-gender adjusted comparisons of utilization among SCHAP, AFDC, and disabled adults. As we expected, the disabled group had the highest rates of inpatient utilization based all three inpatient utilization measures, followed by the AFDC group and lastly, the SCHAP group. For instance, in the adjusted comparisons, the number of admissions per 100 enrollees was 41.1 for the disabled group, 26.3 for the AFDC group, and 8.8 for SCHAP members. Furthermore, the disabled group had more hospital days and a longer average length of stay than the AFDC and SCHAP groups.

For ambulatory services, in the age-gender adjusted comparisons, the SCHAP group had more visits to primary care providers and fewer emergency room and specialist visits than

Table 6-4

Comparison of Utilization[1] Among SCHAP, AFDC, and Disabled Adults (Age 18 or over)

	Unadjusted			Age-Gender Adjusted		
	SCHAP	AFDC	Disabled	SCHAP	AFDC	Disabled
Inpatient Admissions						
Number of admissions per 100 enrollee years	8.8	13.8	45.2	8.8	26.3	41.1
Number of days per 100 enrollee years	33.6	87.3	339.6	33.6	217.2	319.1
Average length of stay (in days)	3.7	5.9	7.6	3.7	5.5	8.5
Ambulatory use (per enrollee year)						
Number of emergency room visits	0.40	1.04	0.82	0.40	1.02	1.02
Number of office visits[2]	3.28	2.95	4.01	3.28	3.31	3.65
Number of primary care provider visits	2.39	1.73	2.40	2.39	2.04	2.03
Number of specialist visits	0.89	1.21	1.60	0.89	1.28	1.62
Number of prescriptions per enrollee year	7.24	6.19	13.73	7.24	6.78	12.25

NOTES:

[1] Excludes maternity care.

[2] Some numbers may not add up due to rounding errors.

SOURCE: South Carolina Medicaid claims and enrollment files, 1993 - 1995.

their counterparts in the disabled and AFDC groups. Both the AFDC and disabled groups had 1.02 emergency room visits per enrollee year, while the SCHAP group had only 0.4 visits, after adjusting for age and gender. The SCHAP group had 2.39 primary care provider visits per enrollee year, while the AFDC and disabled groups had 2.04 and 2.03 visits, respectively. In contrast, for specialist visits per enrollee year, the SCHAP group had 0.89 visits, while the AFDC group had 1.28 visits and the disabled group had 1.68 visits. Again, the PCCM program under the SCHAP demonstration appears to have had a major impact on improving utilization of primary care providers, and reducing the use of emergency rooms. However, it is impossible to disentangle the impact of SCHAP's benefit design from the PCCM incentives. SCHAP did not pay for nonemergency visits to hospital emergency departments, and that too, was likely to affect utilization patterns and program costs.

Regarding the number of prescriptions per enrollee year, the SCHAP group had fewer prescriptions than the disabled group (7.24 versus 12.25), but somewhat more than the AFDC group (6.78).

6.3.2 Multivariate Analysis

A more rigorous assessment of utilization among the three groups was conducted through multivariate analysis, using an approach similar to that described in Section 6.2.2. The analysis used a quarterly utilization file including the utilization from the three groups – SCHAP, AFDC, and disabled. The results of the logit analysis are displayed in Appendix Table 6-2. (See Appendix A.)

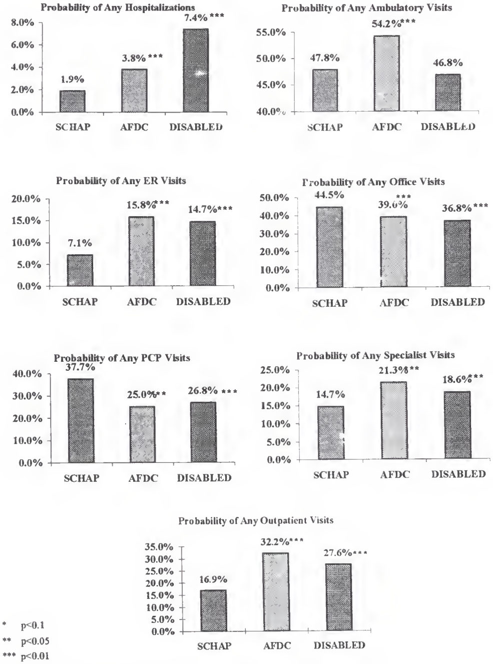
Probability of Utilization among SCHAP, AFDC, and Disabled Adults. Figure 6-4 presents the estimated probabilities of quarterly utilization for different types of services among SCHAP, AFDC, and disabled adults, based on the logit analyses. The control variables were evaluated at the means.

For quarterly inpatient hospitalizations, AFDC and disabled adults were more likely to have hospitalizations than those in the SCHAP demonstration program, all other things being equal. The predicted probabilities of having a hospitalization were 1.9 percent for SCHAP members, 3.8 percent for the AFDC group, and 7.4 percent for the disabled group.

For quarterly ambulatory visits, including both outpatient and physician visits, the AFDC group was more likely to have ambulatory visits than the SCHAP group (54% versus 47%). However, there was no significant difference in the predicted probability of any ambulatory visits between the SCHAP and disabled groups (48% versus 47%).

For quarterly outpatient visits, including emergency room and other outpatient visits, the AFDC group was more likely to have an outpatient visit (32%), followed by the disabled group

Figure 6-4
Probability of Quareterly Utilization by Type of Service Between SCHAP, AFDC and Disabled Populations



NOTE: The significant levels of AFDC and Disabled groups are compared with the SCHAP group.
SOURCE: South Carolina Medicaid claims and enrollment files, 1993 - 1995.

(28%), and finally the SCHAP enrollees (17%). In particular, the AFDC and disabled groups were more likely to use emergency rooms than the SCHAP group (15-16% versus 7%).

Regarding quarterly office visits, we found that the predicted probability of an office visit was significantly higher among SCHAP members (45%) than among the AFDC (39%) and disabled (37%) groups. We also examined the predicted probability of primary care visits and specialist visits separately. The SCHAP group (45%) was more likely to have visits to primary care providers than the AFDC (25%) and disabled (27%) groups. In contrast, the SCHAP group (15%) was slightly less likely to have specialist visits compared to the AFDC (21%) and disabled (17%) groups.

6.3.3 Summary

Based on the comparisons of utilization and costs, the SCHAP group was the least expensive in terms of PMPM relative to two Medicaid comparison groups comprised of AFDC and disabled adults. In addition, SCHAP enrollees were more likely to use primary care providers and less likely to use inpatient care, emergency rooms, and other outpatient services compared to their counterparts in the AFDC and disabled groups. There are three possible explanations for these findings.

1. **Working population**: The SCHAP program targeted the low-income working uninsured. The working population is generally healthier and better educated than the AFDC and disabled populations. Therefore, the SCHAP group had fewer needs for expensive services, as compared to the AFDC and disabled groups.

2. **PCCM program**: Under the SCHAP demonstration, SCHAP members were required to choose a Primary Care Coordinator who is responsible for overseeing all aspects of a members' care. The PCCM program may have provided better access to primary care providers for SCHAP enrollees which in turn seems to have resulted in lower use of hospital-based ambulatory care, especially emergency room visits.

3. **SCHAP program management**: The SCHAP program staff educated their enrollees to use health care services appropriately. The State's final report on the SCHAP program stated that "As participants enrolled, SCHAP staff spent significant time explaining the program, how it worked, and the requirements and reasons for physician referral. The participants understood if they abused the program or did not follow the guidelines for obtaining treatment, they could endanger the economic stability of the program or face paying the bill themselves." Therefore, member education may have contributed to these utilization patterns.

It is likely that all three of these factors worked together to produce the lower levels of cost and use exhibited within the adult SCHAP population. No one factor alone could account for differences of the magnitude we observed.

In sum, the analysis of the SCHAP program has shed light on important issues in providing health insurance for the working uninsured. We have shown that the working uninsured population is less expensive than other Medicaid groups. Moreover, this analysis has demonstrated that a gatekeeper program can improve access to primary care, especially in conjunction with a patient education effort. and a benefit design which fosters the use of ambulatory care services. Consequently, utilization and costs of health care may be more cost-effective than in an unconstrained fee-for-service system.

7

Utilization in Health Access Spokane

The Health Access Spokane (HAS) demonstration in Washington State was the only program to provide health care services through capitated managed health care plans (MHCPs). The MHCPs were paid a negotiated capitation rate on a monthly basis, independent of the amount or types of services provided to HAS enrollees. As a result, we do not have cost data associated with individual services. Therefore, the focus of this chapter is on health care utilization patterns of enrollees and not costs. Encounter data were obtained and analyzed for two MHCPs – Group Health Northwest (GHNW) and Medical Services Corporation (MSC).

As part of the evaluation, we also obtained data for individuals enrolled in a State-subsidized health insurance program, known as the Basic Health Plan (BHP). At the time HAS began, BHP was offered to individuals with incomes up to 200 percent of the Federal Poverty Level (FPL). HAS was offered as an intermediate alternative on a continuum of Medicaid and BHP coverage, for individuals below 150 percent FPL who were not eligible for Medicaid. Given the differences in cost-sharing and other features between HAS and BHP, our analysis compares utilization patterns between the two programs.

The analysis will address three main questions:

- How do utilization patterns differ between HAS and BHP enrollees?
- To what extent do utilization patterns differ between the two MHCPs?
- Do utilization patterns change with length of enrollment?

To address these questions, the number of visits and the probability of a visit are examined on an annual and quarterly basis.

7.1 Analytic Framework

All analysis of the utilization of health services by HAS enrollees is presented in relation to that of BHP enrollees. Although analyzing utilization of HAS enrollees provides a general understanding of the level and type of use, comparison of utilization trends with a similar group of individuals results in a more meaningful benchmark. For instance, it helps reveal differences in utilization patterns that may be a function of program characteristics. Such information will assist policy makers and administrators to develop future health care programs to serve low-income individuals.

The two managed care plans that provided services to most of the HAS enrollees were quite different. MSC is an IPA-model HMO, while GHNW is primarily a staff model plan. Therefore, in addition to examining program impacts, we investigated the influence of type of MHCP on utilization of health services. Each of these comparisons is described in further detail below.

7.1.1 HAS and BHP Comparison

Although, both HAS and BHP enrolled low-income individuals, the programs differed in that HAS did not have a waiting period for preexisting conditions or a copayment requirement. When HAS was introduced, BHP had a one-year waiting period for preexisting conditions and this was later reduced to six months. BHP members faced copayments of $8 to $10 per doctor visit, $25 to $50 per emergency room visit, and up to $100 per day for hospitalizations.

Given these differences in copayments and preexisting condition clauses, we would expect HAS enrollees to have higher utilization of health care services than those in BHP even if the individuals enrolled in the program had similar health status. To test this hypothesis, utilization of HAS enrollees was compared to that of BHP enrollees who were also living in Spokane County and members of the two MHCPs contracting with HAS.

7.1.2 Managed Care Plan Comparison

For the first two years of operation, all HAS enrollees received services through two MHCPs: Medical Services Corporation and Group Health Northwest. Subsequently, in early 1995, HAS started contracting with two more plans, Qual-Med and Blue Cross Community Health Plan. Due to the late entry of these plans and the small number of HAS members enrolled in them, the analysis will focus on MSC and GHNW.

Medical Services Corporation, an IPA-model HMO, has been in existence since 1933. About 85 family physicians and 400 specialists were selected for participation in BHP/HAS, based on their cost-effectiveness as well as geographic location. Specialist care could be obtained only upon referral from the primary care physician. Although some physicians received payment on a capitated basis, the majority were paid on a discounted fee-for-service basis (95 percent of a fee schedule with a 10 percent withhold). MSC contracted principally with three hospitals in the Spokane area and inpatient care was paid on a DRG basis.

Group Health Northwest belongs to the Group Health Cooperative network founded in 1947, and historically has been a family practice, staff model HMO. GHNW also established a network model for family practice physicians in Spokane. Initially, all HAS enrollees were enrolled in the staff model. About 35 physicians were employed by the staff model, and they were paid on a salaried basis. Another 22 physicians participated in the community-based networks, and they were paid on a capitated basis. The plan contracted for specialty consultations and hospital services. Consultants were paid mostly on a discounted fee-for-service basis, although capitated contracts have been negotiated for ear/nose/throat, cardiology, obstetrics, and pulmonology. Pediatricians, allergists, and ophthalmologists were paid on a stipend basis, that is, a flat rate to care for GHNW patients. Hospitals were usually paid on a per-diem basis, when such arrangements could be negotiated; otherwise, they were paid on a discounted-fee basis. GHNW utilized two hospitals in the Spokane area.

Given these differences in physician payment arrangements, we hypothesized that utilization patterns would differ between GHNW and MSC enrollees. In addition, when HAS was introduced, MSC had considerable capacity to accommodate HAS enrollees but GHNW placed caps on enrollment due to limited capacity. Although GHNW hired new physicians and built a clinic to accommodate the membership growth, the initial capacity constraint may have affected access to health care services.

Both descriptive and multivariate analysis was performed to evaluate differences in service utilization by HAS and BHP enrollees in the two plans.

7.2 Data and Analytic File Construction

The HAS Integrated Database was constructed for the evaluation by the Office of Research and Data Analysis (ORDA) in Washington State. It contains information on monthly enrollment in HAS and BHP, identifies the managed care plan that received capitation payment for the enrollee, and includes demographic characteristics of the enrollees. It also has utilization records of all MSC members derived from the encounter data provided by the plan. Due to delays in receiving the encounter data from GHNW, utilization information for GHNW enrollees was not included in the HAS Integrated Database and therefore had to be obtained separately. This data was linked to the enrollment data utilizing social security number, name, and date of birth.

The managed care plans were required to submit encounter data on all services, including those received at hospitals and physician offices. Problems may arise with encounter data as they often are not automatically generated from the plans' payment system (Gold *et al.*, 1995). In addition, data may be incomplete because even when physicians are paid on a fee-for-service basis, not all information is reported by providers (Howell, 1996). To minimize any differences that may arise from the reporting process used by each plan, the State specified a uniform layout and definitions for the encounter data file. Nevertheless, limitations of encounter data should be kept in mind when conducting analyses.

Analytic files created from the encounter data include information on hospitalizations, emergency room use, and other outpatient visits. In addition, the number of Primary Care Provider (PCP) and specialist visits were identified using definitions provided in HEDIS 2.5 (NCQA, 1995). Utilization measures were aggregated both on a quarterly and annual basis.

Since all children enrolled in HAS were transferred to BHP-Plus when it was introduced in July 1994, the analysis is limited to adults only, those 19 years or older. Although HAS began in April 1993 and remained in operation through March 1996, utilization data were only available through December 1995.

7.3 Average Annual Utilization

Table 7-1 presents the average annual utilization per 100 HAS and BHP enrollees.[2] Utilization by MSC and GHNW enrollees is presented separately and a ratio of HAS versus BHP for all utilization measures is included. Utilization measures reflect rates of inpatient care, outpatient hospital visits (number of ER and other outpatient), and physician visits (PCP and specialist).

The ratio of HAS versus BHP utilization is almost always greater than one, indicating that HAS enrollees were more intensive users of health services than BHP enrollees. For instance, MSC's annual inpatient hospital admission rate was 17.05 per 100 HAS enrollees compared to 9.43 for BHP enrollees, resulting in a ratio of 1.81. The only utilization measure that reveals slightly higher use among BHP enrollees than HAS enrollees is specialist visits in MSC. BHP enrollees on average had 507.88 visits while HAS enrollees averaged 477.85 visits.

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[2] The utilization information when adjusted for age and sex distribution produced results very similar to the unadjusted utilization measures presented.

Table 7-1

Comparison of Average Annual Utilization Among Health Access Spokane and Basic Health Plan Enrollees

Utilization Per 100 Enrollees	Health Access Spokane (HAS)	Basic Health Plan (BHP)	Ratio (HAS/BHP)
Medical Services Corporation			
Inpatient Admissions	17.05	9.43	1.81
Inpatient Days	70.22	27.15	2.59
Total OPD Visits	79.02	55.87	1.41
ER Visits	19.45	16.25	1.20
Other OPD Visits	59.57	39.62	1.50
Physician and Other Visits	772.55	748.11	1.03
PCP Visits	294.71	240.25	1.23
Specialist Visits	477.85	507.86	0.94
Group Health Northwest			
Inpatient Admissions	6.09	4.65	1.31
Inpatient Days	29.15	19.61	1.49
Total OPD Visits	29.22	19.27	1.52
ER Visits	18.09	11.83	1.53
Other OPD Visits	11.13	7.44	1.50
Physician and Other Visits	735.91	462.23	1.59
PCP Visits	448.65	296.88	1.51
Specialist Visits	287.26	165.35	1.74

SOURCES: HAS Integrated Database and Group Health Northwest Encounter Data.

Several explanations can be suggested for the overall higher use of services among HAS enrollees:

- **Lack of copayments for services provided through HAS**. Perhaps the most compelling reason is the lack of copayments in the HAS program, compared to BHP. HAS enrollees could have used excessive amounts of health services as no copayments were required. BHP enrollees had to make substantial out-of-pocket payments, especially for ER and inpatient care, and this could account for the observed differences.

- **HAS enrollees were sicker than BHP enrollees**. This can be inferred from secondary data sources although we were not able to confirm this directly. Among those enrolled in BHP, 9 percent were reported to be in fair/poor health (Diehr *et al.*, 1993) compared to 14 percent for HAS (See Table 8-1). It should be noted that these data are from different sources and different time periods; nevertheless it supports the notion that HAS enrollees were sicker than BHP enrollees. (Sicker enrollees faced a strong financial incentive to join HAS, due to the absence of copayments and no waiting period for pre-existing conditions.)
- **BHP preexisting condition clause**. As BHP had a waiting period for preexisting conditions, those individuals who had the worst health status and the most immediate need may have been the ones that joined HAS. These individuals would therefore have higher utilization rates, at least initially, in HAS.

In addition to observing differences between HAS and BHP enrollees, we found differences between the two MHCPs. In almost all cases MSC enrollees had higher rates of use than GHNW enrollees. Focusing on the HAS utilization rates, for example, MSC reported significantly higher hospital admission rates (17.05 versus 6.09), length of stay (70.22 versus 29.15 days), and more outpatient visits (79.02 versus 29.22). Both plans had similar ER visit rates for HAS enrollees (19.45 versus 18.09). In addition, although the total number of physician visits per 100 enrollees annually was quite similar, the number of PCP visits was much lower in MSC and the number of specialist visits was significantly higher.

One explanation for higher use in MSC could be due to health status differences between those enrolled in the two plans. However, the survey data revealed that there were no real differences in health status between MSC and GHNW enrollees. Among those interviewed, 14 percent in both plans reported their health status to be fair or poor. In addition, similar proportions reported functional limitations (36 percent in MSC versus 35 percent in GHNW). A more plausible explanation for the higher use among MSC enrollees could be less effective gatekeeper controls in MSC compared to GHNW. Since MSC providers were largely reimbursed through a fee-for-service payment system they may had more of a financial incentive to encourage visits than the salaried GHNW providers.[3]

7.4 Multivariate Analysis

The descriptive data presented above reveal many differences in utilization between HAS and BHP enrollees and between the two managed care plans, but to reach more definitive conclusions, multivariate analysis was performed. We estimated the probability of having a hospitalization and an ambulatory visit (which includes all physician and outpatient visits). Ambulatory visits were further subdivided into four components: ER, other outpatient, PCP, and specialist visits. We also estimated the total number of ambulatory visits and the number of PCP visits.

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[3] Alternatively, it is possible that the lower utilization rates in GHNW reflect incomplete encounter data, especially for inpatient care. We have not confirmed this with the plan.

7.4.1 Model Specification

Logistic regression was used to estimate the probability equations, while ordinary least squares (OLS) regression was used for the volume equations. The independent variables included age and gender (proxies for health status and need), length of enrollment, length of program operation, and managed care plan. The analysis was performed on quarterly utilization data.

Length of enrollment was measured as the continuous number of quarters an individual was enrolled in either HAS or BHP. If a HAS member had some BHP experience, then only the HAS enrollment segment was included in the analysis. In addition, only the first segment of enrollment for both HAS and BHP enrollees was analyzed. A squared term is also included to capture any non-linear relationships between length of enrollment and utilization of health services.

The counter for length of program operation starts with a '1' for the first quarter when HAS began and increases by one for each quarter of HAS operations. This variable should reveal changes in utilization patterns as the program matures. A dummy variable (MSC=1) is included to show differences in utilization among those enrolled in the two managed care plans.

HAS and BHP membership impacts are captured by a program indicator variable (HAS=1). We would expect this to have a positive and significant coefficient as the descriptive data revealed that HAS enrollees were far more intensive users of health services than those enrolled in BHP. An indicator for experience in BHP prior to enrollment in HAS was included in previous model specifications to differentiate between those transferring from

BHP and new enrollees. This variable was not significant in any of the estimations and therefore was excluded from the final model specification shown in this report.

7.4.2. Results

The coefficients and standard errors are reported in Table 7-2, along with the odds ratios from the logistic regressions. Age is positive and significant for all of the utilization measures indicating that older enrollees in both HAS and BHP are more intensive users of health services than younger enrollees. Gender is an important determinant of all types of utilization with the notable exception of ER use. The results indicate that women are more intensive users of health services in general compared to men. The impacts of the other variables, controlling for the influence of these demographic risk factors, are discussed in separate sections below.

HAS Versus BHP Enrollees. As expected, the program indicator was significant in all of the logistic and OLS estimates (See Table 7-2). HAS enrollees had a higher probability of using all health care services than BHP members even when age, gender, length of program enrollment, and length of program operations have been controlled for. Similarly, the total number of visits was higher for HAS enrollees than BHP members.

Figure 7-1 shows the magnitude of the odds ratio of the program enrollment variable for each of the utilization measures. The odds ratios are very similar across measures, ranging from 1.41 to 1.54, indicating that HAS enrollees had a 41 percent greater probability of a PCP visit and were 54 percent more likely to have any ambulatory visit compared to BHP

Table 7-2

Determinants of Utilization Among HAS and BHP Enrollees

Variable	Probability of Hospitalization		Probability of a Ambulatory Visit		Probability of an Emergency Room Visit		Probability of an Outpatient Visit		Probability of a Primary Care Physician Visit		Probability of a Specialist Visit		Total Number of Ambulatory Visits	Total Number of Primary Care Physician Visits
	Parameter Estimate	Odds Ratio	Parameter Estimate	Odds Ratio	Parameter Estimate	Odds Ratio	Parameter Estimate	Odds Ratio	Parameter Estimate	Odds Ratio	Parameter Estimate	Odds Ratio		
Intercept	-5.9906 ***		-0 6106 ***		-3.5691 ***		-4.2578 ***		-0.7724 ***		-1.9373 ***		0.521546 ***	0.539396 ***
	(0.277)		(0.069)		(0.190)		(0.153)		(0.069)		(0.076)		(0.096)	(0.046)
Age	0.0321 ***	1.033	0.0143 ***	1.014	-0.00535 *	0.995	0.0102 ***	1.01	0.0115 ***	1.012	0.0213 ***	1.022	0.028236 ***	0.010212 ***
	(0.004)		(0.001)		(0.003)		(0 002)		(0.001)		(0.001)		(0.002)	(0.001)
Gender	-0 2971 ***	0.743	-0.6985 ***	0.497	-0.1116	0.894	-0.514 ***	0.598	-0.6003 ***	0.549	-0 6875 ***	0.503	-0.73208 ***	-0.316456 ***
(Male=1)	(0.114)		(0.028)		(0 078)		(0.064)		(0.029)		(0.032)		(0.039)	(0.019)
Program	0.376 ***	1.456	0.4342 ***	1.544	0.408 ***	1.504	0.4092 ***	1.506	0.3416 ***	1.407	0.3742 ***	1.454	0.626944 ***	0.256555 ***
(HAS=1)	(0 106)		(0.027)		(0.076)		(0.058)		(0.028)		(0.030)		(0.038)	(0.018)
Managed Care Plan	0.725 ***	2.065	0.269 ***	1.309	0.2345 ***	1 264	1.5777 ***	4 844	-0.1983 ***	0.82	0.8727 ***	2.393	0.283781 ***	-0.291982 ***
(MSC=1)	(0.112)		(0.027)		(0.076)		(0.075)		(0.028)		(0.031)		(0.038)	(0.018)
Length of Enrollment	-0.00545	0.995	-0 0655 ***	0 937	0.0341	1.035	-0.00931	0.991	-0.0739 ***	0.929	-0.1112 ***	0.895	-0.095062 ***	-0.040378 ***
	(0 070)		(0.018)		(0 051)		(0.039)		(0.019)		(0.020)		(0.026)	(0.012)
Length of Enrollment Squared	0 000783	1.001	0.00375 **	1.004	-0.00471	0.995	-0.00118	0.999	0.00376 **	1.004	0.00903 ***	1.009	0.006081 **	0 001796
	(0.007)		(0.002)		(0.005)		(0.004)		(0.002)		(0.002)		(0.002)	(0.001)
Length of Program Operation	0.00885	1.009	0.0265 ***	1.027	0.0066	1.007	0.00148	1.001	0 0385 ***	1.039	0.0112 **	1.011	0.022001 ***	0.01884 ***
	(0.020)		(0 005)		(0.014)		(0.011)		(0.005)		(0.006)		(0.007)	(0.003)
Sample Size	23200		23200		23200		23200		23200		23200		23199	23199
-2 Log Likelihood	3919.55		32159.34		6596.026		10326.624		31076.82		28596.959		—	—
R-Square	—		—		—		—		—		—		0.05	0.04

*p<0.10
**p<0.05
***P<0.01

NOTE: Standard errors in parentheses.

SOURCES: HAS Integrated Database and Group Health Northwest Encounter Data.

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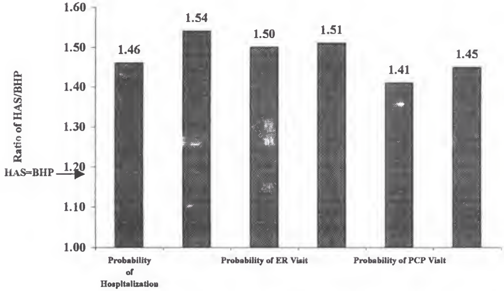
Figure 7-1

Distribution of Odds Ratios: Comparison of Utilization of HAS and BHP Enrollees



NOTE: Represents odds ratios from logistic regression analysis of HAS and BHP utilization. A ratio greater than one indicates that HAS utilization is greater than BHP utilization. A ratio less than one indicates that HAS utilization is less than BHP utilization.

SOURCE: Primary analysis of encounter data for HAS and BHP enrollees.

enrollees. Therefore, HAS enrollees on average were 50 percent more likely than BHP enrollees to have any type of health care utilization.

This provides strong evidence that differences in HAS program features may substantially increase the probability of a visit or the number of visits. Although this result holds even when controlling for age and gender, it is important to realize that these two demographic variables may not fully control for health status and that some of the residual difference may be a function of health status differences between enrollees in the two programs.[4]

Managed Care Plan. The regression analysis revealed significant differences in the probability and volume of use between the two managed care plans. Those enrolled in MSC had a higher probability of hospitalization and were more likely to have an ambulatory visit. They also had a greater likelihood of ER, other outpatient, and specialist visits, but interestingly, a lower probability of one or more PCP visits than GHNW plan enrollees. Similar relationships held for the volume equations, where the total number of ambulatory visits was higher in MSC but the total number of PCP visits was lower.

Figure 7-2 presents the distribution of the odds ratios for each of the utilization measures. There is much variation in the odds ratios, with MSC enrollees having a 484

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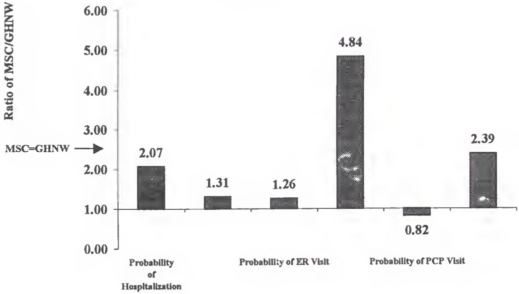
[4] We had hoped to conduct a survey on a sample of Basic Health Plan enrollees in Spokane County who were eligible for, but not enrolled, in the demonstration. This would have provided a contrast of two programs with different benefit packages and cost-sharing requirements, and would have provided insights into the eligibility determination and enrollment processes. However, the BHP administrator and the Washington Attorney General determined that releasing the names of BHP members for the evaluation of HAS would violate the confidentiality of BHP members and refused to permit this use of the BHP enrollment list. Thus, we did not obtain a comparison group in Washington, against which to compare HAS utilization. The survey would have provided health status measures for BHP enrollees, similar to those obtained for HAS members.

Figure 7-2

Comparison of Utilization Among Medical Services Corporation (MSC) and Group Health Northwest (GHNW) Enrollees



NOTE: Represents odds ratios from logistic regression analysis of MSC and GHNW utilization. A ratio greater than one indicates that MSC utilization is greater than GHNW utilization. A ratio less than one indicates that MSC utilization is less than GHNW utilization.

SOURCE: Primary analysis of encounter data for HAS and BHP enrollees.

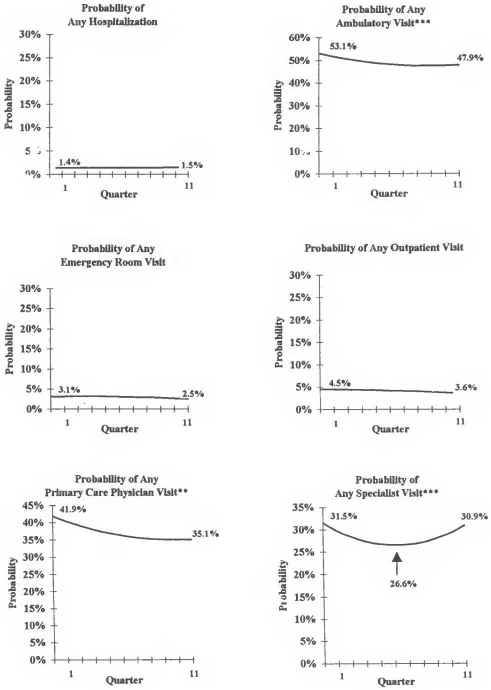
percent higher probability of an outpatient visit and an 18 percent lower probability of a PCP visit compared to GHNW enrollees. An explanation for this result could be that GHNW had more effective management of utilization through its PCPs, and thus had a higher probability of a PCP visit but lower likelihood of all other visits. It is also possible (but not likely) that the capacity constraints initially experienced by GHNW could have resulted in limited access to services compared to MSC.

Length of Enrollment. Both the number of quarters enrolled and the squared term were significant in the regressions that estimated the probability of an ambulatory visit (and number of visits), and specifically the probability of a PCP or specialist visit. Thus, we found a non-linear relationship between continuity of enrollment and utilization. The signs of the coefficients indicate that as continuity of enrollment increased, the probability of these visits decreased initially and then began to increase slightly. The results also indicate that the probability of other outpatient visits declined as length of enrollment increased. Length of enrollment was not significant for the other utilization measures suggesting that the likelihood of being hospitalized or of having an ER visit did not vary significantly with length of enrollment.

A simulation was performed of the relationship between quarter of enrollment and probability of a visit and the results are shown in Figure 7-3. The probability of PCP, specialist, and ambulatory visits have an inverted U relationship, as mentioned above. The variation in the quarterly utilization is quite small and therefore even though the relationship

Figure 7-3

Probability of Utilization by Type of Service and Quarter for HAS and BHP Adults



Significance level of Time Trend: *p<0.10 **p<0.05 ***p<0.01

is non-linear, from a policy perspective there are no discernible differences on a quarterly basis. For instance, the probability of an ambulatory visit was 53 percent in the first quarter of enrollment, reaching a low of 47 percent in the ninth quarter (i.e., more than two years later), and then increasing to 48 percent in the final quarter. This represents a gradual tapering off, rather than a sharp drop-off that might be expected if there were pent-up demand. As indicated in Figure 7-3, both probability of a PCP and specialist visit also exhibit a similar pattern as ambulatory visit.

Length of Program Operation. Both the probability and volume of ambulatory visits increased significantly over the life of the program. This could be interpreted as an indication of a "learning curve," in other words, that enrollees were more likely to obtain care over time as they learned how to "use the system." Alternately, this could reflect changes on the supply side, for example, increases in available capacity.

7.5 Conclusions

HAS enrollees clearly were more intensive users of health care services than BHP enrollees. The implications of this finding are not clear. Does this indicate over-utilization by HAS enrollees due to lack of copayments or under-utilization by BHP enrollees due to financial barriers? Another possible explanation is that the high utilization among HAS enrollees could reflect "adverse selection" by HAS, as suggested by secondary data from a separate evaluation. It is possible that those with greater medical need were the ones drawn to HAS as it did not have a waiting period for preexisting conditions and required no copayments for medical services. Additionally, anecdotal information from the managed care plans suggests that HAS enrollees were sicker than BHP enrollees; for example, it has been reported that HAS enrolled those requiring transplants because this was a covered benefit under HAS but not under BHP.

The analysis also revealed that utilization differed among the managed care plans even though the health status of enrollees was similar. The difference in the level of utilization between GHNW and MSC may be a reflection of the plan characteristics. GHNW, which is predominantly a staff model HMO had significantly lower utilization rates than MSC, an IPA-model. Salaried payment arrangements among the GHNW providers may have resulted in more effective 'gate-keeping' than the fee-for-service arrangement in MSC where providers had the financial incentive to encourage visits. Another explanation, and a caveat whenever encounter data are used, is the relative completeness of the two data systems. It is possible that higher use among MSC enrollees is an artifact of more complete data.

The relationship between length of enrollment and utilization remained quite consistent over time and although there is some evidence of a non-linear relationship the magnitude of the changes are extremely small. Therefore, we can conclude that there were no large variations in utilization even among those who may have been uninsured prior to enrollment in HAS.

8

Access and Satisfaction in the Medicaid Expansion Demonstration

This chapter discusses the implications of the three demonstration programs for access to and satisfaction with medical care. We present three analyses to depict both cross-sectionally and longitudinally how demonstration participants compared with each other, as well as with relevant comparison groups. The first analysis, presented in Section 8.1, compares the level of access and satisfaction among demonstration participants in the three programs. We relate variations in access and satisfaction to the structure of the programs.

The second analysis, presented in Section 8.2, examines the impact of loss of insurance coverage on access and satisfaction. This is the corollary to the impact of *obtaining* coverage – here we look at what happens when coverage *ends*. We look at the impacts both in Maine and South Carolina, taking advantage of two "natural experiments." In Maine, we compare levels of access and satisfaction between enrollees and eligible non-enrollees over two points in time, one before and one after the Maine Health Program (MHP) ended. In South Carolina, we compare access and satisfaction among continuous enrollees and disenrollees in the South Carolina Health Access Plan (SCHAP).

The chapter concludes with a discussion about lessons learned from the Medicaid Expansion Demonstration with regard to access and satisfaction within the low-income population.

8.1 Cross-Sectional Comparison of Access and Satisfaction among Demonstration Participants

8.1.1 Analytic Framework

We begin with a comparison of access and satisfaction among demonstration participants in the three programs, based on one round of survey data. As such, we cannot infer program outcomes *per se*, because we do not have pre-demonstration information on access and satisfaction upon which to derive differences before and after program implementation. Nevertheless, by controlling for variations in demographic characteristics and health status across the three demonstrations, coupled with our knowledge of program characteristics, we can infer how demonstration participants have fared across the three programs.

Our analytic framework for the multivariate analysis is adapted from Aday and Andersen (1981), which posits that access to care is determined by three factors: predisposing, enabling, and need. Predisposing factors are present prior to episodes of care and may reflect a consumer's "taste" for health care (in the classical economic model). Predisposing characteristics include age, gender, race/ethnicity, and education. Enabling factors permit those predisposed to using health services to actually do so by eliminating financial and nonfinancial barriers to care. Such factors include poverty status and employment status, which are associated with ability-to-pay as well as time costs.[1] Need factors are proxied by four self-reported measures of health and functional status, including perceived health status (excellent, very good, good, fair, poor), whether physical health or mental health interferes with social activities (each reported separately), and whether health limits daily functions.

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[1] Insurance coverage also is considered an enabling factor, but here, the entire sample consists of people insured by the Medicaid Expansion Demonstration. We include a demonstration indicator to capture differential effects of the demonstration programs.

Finally, we control for the demonstration program to ascertain differences attributable to the three programs, controlling for individual enrollee characteristics. Again, it should be noted that this model does not enable us to assess program ***impacts***, but rather to generalize about program ***variations***.

Our analysis draws on a wide range of access and satisfaction measures. Access measures include the following: (1) probability of hospitalization in the past year (typically a non-discretionary measure of use); (2) probability of any ambulatory visit in the past three months (regardless of setting); (3) probability of a visit to an emergency room, to an outpatient hospital setting, and to another setting in the past three months; (4) probability of a routine check-up in the past year; (5) probability of a dental visit in the past year (an uncovered service among the three demonstration programs); and (6) probability of any unmet need in the past year. The survey asked "In the past year, was there anytime when you or anyone in your family needed or thought they needed medical care but did not get it?" These measures reflect the likelihood of initial entry into the health care system. We excluded measures of the number of visits from the access analysis for two reasons: first, because they are less likely to be accurately reported by respondents; and second, because the determinants of the number of visits reflect a complex interaction of patient and physician decision-making, and hence, are less likely to capture dimensions of access.

Satisfaction measures include the following eight dimensions: (1) ability to see the doctor of choice, (2) arrangements for getting care on nights and week-ends, (3) availability of medical information and advice by telephone, (4) travel time to a doctor, (5) waiting time for an appointment, (6) waiting time in the office, (7) overall quality of care, and (8) overall cost of care.

The survey was restricted to adults (generally the subscriber). The analysis is based on the first wave of the survey in Maine and South Carolina (where two waves were conducted) and the one wave in Washington. We present both descriptive results (which are not adjusted for differences in program "casemix") and multivariate results, which provide a more rigorous assessment of variations in access and satisfaction among the three demonstrations, controlling for individual characteristics.

8.1.2 Characteristics of Demonstration Participants

The three programs attracted a different mix of participants, underscoring the importance of utilizing multivariate analysis in the comparisons. Variations in the enrollee mix are accounted for in part by the orientation of the programs (e.g., employment-based versus individual enrollment) or the local demographic composition (e.g., racial mix of the geographic area). For example, as shown in Table 8-1, men comprised a disproportionate share of SCHAP subscribers probably due to the employment-based structure of the program.

Table 8-1

Comparison of Demographic Characteristics Among Demonstration Participants: Medicaid Expansion Demonstration

Characteristic	Maine Health Program (n=437)	South Carolina Health Access Plan (n=338)	Washington Health Access Spokane (n=197)
Age (chi sq=21.04*)**			
19-24	9.3%	12.0%	14.8%
25-34	35.8	28.7	26.8
35-44	27.4	32.1	24.1
45-54	14.5	17.6	21.7
55-65	13.0	9.6	12.7
Mean (years)	38.5	38.1	38.8
Gender (chi sq=47.43*)**			
Male	46.2	55.5	36.8
Female	53.8	44.5	63.2
Race (chi sq=100.73*)**			
White	95.3	72.1	93.0
Black	1.4	21.1	1.5
Other	3.3	6.8	5.5
Highest year of schooling (chi sq=107.41*)**			
Grades 1-8	7.6	2.7	0.5
Grades 9-11	19.1	16.3	7.4
Grade 12	50.2	43.5	31.5
College/Graduate School	23.1	34.9	60.6
Percent with income below FPL	83.8[a,b]	38.7[c]	51.7
Current employment status (chi sq=166.05*)**			
Full-time	22.5	89.3	29.4
Part-time	27.0	9.2	30.2
Not working	50.6	1.5	40.4
Self-reported health status (chi sq=81.26*)**			
Excellent	12.5	25.8	21.5
Very Good	27.7	36.4	38.2
Good	34.6	29.2	26.3
Fair	19.4	8.0	7.2
Poor	5.9	0.6	6.8
Physical health interferes with social activities (chi sq=58.02*)**			
All of the time	9.9	2.9	5.9
Some of the time	13.4	4.0	12.4
Little of the time	13.2	7.5	10.2
None of the time	63.5	85.6	71.6
Mental health interferes with social activities (chi sq 24.71*)**			
All of the time	6.4	2.5	3.6
Some of the time	10.6	5.0	11.0
Little of the time	9.3	5.8	10.2
None of the time	73.6	86.7	75.2
Percent whose health limited light activities	15.4	2.2	11.1

NOTES:

[a] Maine significantly different from South Carolina (p<0.05).

[b] Maine significantly different from Washington (p<0.05).

[c] South Carolina significantly different from Washington (p<0.05).

*** p<0.01

SOURCE: Medicaid Expansion Demonstration Household Survey.

SCHAP participants were more likely to be non-white than in the other two programs, but that reflects the demographic mix of the two counties in which SCHAP took place.

The education level of Health Access Spokane (HAS) participants was considerably higher than in the other two programs, with three-fifths having more than a high-school education (versus 23 percent in Maine and 35 percent in South Carolina). However, we have been told that HAS attracted local college students who were otherwise uninsured. Most MHP enrollees had incomes below poverty (84 percent), reflecting the lower income threshold for initial eligibility in Maine versus the other two programs.

The majority of SCHAP respondents were employed on a full-time basis (89 percent) with most of the remainder working on a part-time basis (9 percent). In contrast, the majority of MHP and HAS enrollees were either not working or working on a part-time basis. Again, this is consistent with the structure of SCHAP as an employment-based program.

In general, SCHAP members reported better health status than enrollees in the other two programs (again, likely a reflection of their tie to the workforce). Many fewer were in fair or poor health, and fewer reported that their physical or mental health interfered with social activities. Also, their health was less likely to interfere with daily functions. Overall, MHP enrollees tended to be in the poorest health, as reflected by the proportion reporting they were in fair or poor health and the likelihood that physical or mental health interfered with social activities all or some of the time.

8.1.3 Variations in Access to Care

Table 8-2 presents descriptive information on levels of access to care across the three programs (unadjusted for health status and other factors), while Table 8-3 presents the regression results. To begin with, there were no significant differences among the three programs in the likelihood of a hospitalization; such care typically is non-discretionary and we would not expect any differences once we controlled for health status (Andersen and Newman, 1983). Additionally, we did not observe any differences in the likelihood of a dental visit based on the multivariate analysis. Dental care was an uncovered service for adults in all three programs so we would not expect to observe any variations.

Significant differences did emerge with respect to ambulatory care use. HAS and MHP members were more likely to make one or more ambulatory care visits in the past three months than SCHAP members (70-72 percent versus 56 percent). MHP enrollees were two to three times more likely to use the emergency room (29 percent) compared to subscribers enrolled in SCHAP (15 percent) and HAS (9 percent). Hospital outpatient use was nearly twice as high in Maine as well (31 percent versus 16-18 percent). Use of other settings, such as physicians' offices and community clinics, was highest in Washington (66 percent reported a visit in the past three months), followed by Maine (56 percent), and finally, South Carolina (48 percent). In other words, MHP subscribers had the highest likelihood of using hospital-based care, while HAS subscribers were most likely to receive care from other settings.

Table 8-2

Variations in Access to Care Among Demonstration Participants: Medicaid Expansion Demonstration

	Maine Health Program (n=437)	South Carolina Health Access Plan (n=338)	Washington Health Access Spokane (n=197)
Percent who stayed in hospital overnight or longer in the past year	12.5 %	6.1 %	11.6 %
Percent with ambulatory visit in past 3 months			
Any visit	69.6 [a]	56.2 [c]	71.8
Emergency room	28.5 [a,b]	15.0 [c]	8.9
Outpatient hospital	31.0 [a,b]	17.7	16.4
Other place	56.1 [a,b]	48.3 [c]	65.7
Interval since last doctor visit (chi sq=34.13)***			
Within 3 months	69.6	56.2	71.8
Between 3 months and 1 year	13.0	17.7	18.6
Between 1 and 2 years	9.0	11.0	4.1
More than 2 years	8.4	14.9	5.6
Never	0.4	0.0	0.0
Percent with preventive visit in the past year			
Routine physical	56.9 [a]	40.6 [c]	61.4
Dental visit	27.7 [a,b]	35.7	35.9
Percent who did not get needed medical care in previous year	18.0 [b]	20.8 [c]	11.2

NOTES:

[a] Maine significantly different from South Carolina ($p<0.05$).

[b] Maine significantly different from Washington ($p<0.05$).

[c] South Carolina significantly different from Washington ($p<0.05$).

*** $p<0.01$

SOURCE: Medicaid Expansion Demonstration Household Survey.

Table 8-3

Determinants of Access in the Medicaid Expansion Demonstrations

Variable	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Intercept	-2.79 ***	-1.07 **	-2.56 ***	-3.08 ***	-1.15 **	-0.72	-2.66 ***	-0.23
	(0.82)	(0.51)	(0.67)	(0.61)	(0.50)	(0.52)	(0.71)	(0.52)
Age	0.01	0.01 *	-0.02 *	0.00	0.02 **	0.01	0.00	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Gender (1=Male)	-0.17	-0.35 **	0.31	0.30	-0.33 *	-0.49 ***	-0.40 *	-0.12
	(0.26)	(0.17)	(0.20)	(0.19)	(0.17)	(0.16)	(0.22)	(0.17)
Race (1=White)	-0.23	0.70 ***	0.01	0.63 **	0.67 ***	0.19	0.06	-0.20
	(0.37)	(0.25)	(0.29)	(0.31)	(0.24)	(0.26)	(0.37)	(0.25)
Education (1=High School Graduate or Higher)	-0.10	0.21	-0.49 **	0.01	0.26	0.61 ***	-0.18	0.56 **
	(0.33)	(0.22)	(0.24)	(0.23)	(0.22)	(0.21)	(0.26)	(0.22)
Poverty Status (1=Above poverty)	0.04	-0.16	0.00	-0.12	-0.21	-0.04	-0.59 ***	0.34 *
	(0.29)	(0.18)	(0.23)	(0.21)	(0.18)	(0.18)	(0.22)	(0.19)
Employment Status								
Full-time	-0.36	0.41 *	0.41	0.05	0.30	-0.03	-0.27	-0.50 **
	(0.41)	(0.24)	(0.29)	(0.27)	(0.24)	(0.23)	(0.31)	(0.25)
Part-time	0.38	-0.15	-0.31	0.03	-0.01	0.38 *	-0.36	-0.30
	(0.31)	(0.24)	(0.28)	(0.24)	(0.23)	(0.22)	(0.30)	(0.23)
Not working (omitted)								

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Table 8-3 (continued)

Determinants of Access in the Medicaid Expansion Demonstrations

Variable	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Self-Reported Health Status								
Very Good	0.03	0.65 ***	0.79 **	0.64 **	0.64 ***	-0.02	0.75 **	-0.43 *
	(0.48)	(0.22)	(0.34)	(0.30)	(0.22)	(0.23)	(0.37)	(0.23)
Good	0.32	0.57 **	0.83 **	0.67 **	0.43 *	0.10	0.96 ***	-0.50 **
	(0.45)	(0.23)	(0.34)	(0.31)	(0.23)	(0.23)	(0.37)	(0.24)
Fair/Poor	0.80	0.86 ***	0.54	0.86 **	1.00 ***	0.41	1.16 ***	-1.13 ***
	(0.49)	(0.32)	(0.40)	(0.36)	(0.32)	(0.29)	(0.42)	(0.30)
Excellent (omitted)								
Physical health interferes with social activities	0.23	0.99 ***	0.45 *	0.67 ***	0.97 ***	0.11	0.49 *	-0.06
	(0.36)	(0.25)	(0.24)	(0.24)	(0.24)	(0.21)	(0.28)	(0.22)
Mental health interferes with social activities	0.42	-0.04	0.70 ***	0.07	-0.06	0.20	0.85 ***	0.10
	(0.32)	(0.25)	(0.24)	(0.24)	(0.24)	(0.21)	(0.27)	(0.22)
Health limits light activities	0.16	1.59 ***	0.75 **	0.18	0.99 **	0.00	0.17	0.49 *
	(0.37)	(0.44)	(0.30)	(0.29)	(0.38)	(0.29)	(0.33)	(0.29)
Demonstration program								
Maine	0.02	-0.29	1.31 ***	0.63 **	-0.49 **	-0.12	0.13	-0.04
	(0.30)	(0.23)	(0.31)	(0.25)	(0.22)	(0.21)	(0.29)	(0.22)
South Carolina	-0.22	-0.48 *	0.49	0.31	-0.44 *	-0.56 **	1.34 ***	0.26
	(0.42)	(0.26)	(0.38)	(0.30)	(0.25)	(0.24)	(0.34)	(0.24)
Washington (omitted)								
R-square	**0.05**	**0.13**	**0.13**	**0.08**	**0.12**	**0.07**	**0.10**	**0.04**
n	**907**	**905**	**905**	**905**	**904**	**907**	**903**	**904**
chi-square	**48.04**	**123.36**	**113.15**	**69.65**	**117.47**	**67.34**	**92.00**	**41.91**

*p<0.10 **p<0.05 ***p<0.01

SOURCE: Medicaid Expansion Demonstration Household Survey.

These variations in the patterns of use likely reflect differences in the service delivery systems in the two states. Medicaid beneficiaries in Maine – of which MHP enrollees were considered a category of Medicaid assistance – tended to receive care in hospital-based settings due to traditionally low levels of Medicaid participation among private providers, as well as lack of availability in rural areas. In Washington, HAS members were enrolled in managed care organizations (MCOs) on a capitated basis. HAS subscribers selected a primary care provider who served as their "gatekeeper" to hospital-based and specialty care. The MCOs had a strong financial incentive to reduce use of hospital-based care (both emergency room and outpatient clinics). These results are consistent with a recent national study which documented the role of a "medical home" in improving access to care (Lambrew *et al.*, 1996).

SCHAP used a primary care case management (PCCM) model of managed care to control utilization. This might explain lower levels of hospital-based care. However, we also observed lower levels of other types of ambulatory utilization, including the likelihood of having a routine check-up. Moreover, we found higher levels of unmet need among SCHAP enrollees relative to those in HAS (21 percent in South Carolina, versus 11 percent in Washington). In part, this could be explained by the more favorable health status of SCHAP enrollees. Yet, these results prevailed in the multivariate analyses, which controlled for health status. Instead, we explain the lower probability of ambulatory care use among SCHAP enrollees, coupled with higher reported levels of unmet need to the level of "education" and "management" of health care resource consumption. The SCHAP Final Report explains the process as follows:

> The impact of education on service utilization appears to be significant. One of the major assumptions of SCHAP was that with proper education of participants, together with appropriate incentives, resource utilization would be reasonable. As participants were enrolled, SCHAP staff spent significant time explaining the program, how it worked, the requirements and reasons for physician referrals. The participants understood if they abused the program or did not follow the guidelines for obtaining treatment, they could endanger the economic stability of the program or face paying the total bill themselves.

8.1.4 Variations in Satisfaction with Care

Table 8-4 presents descriptive information on variations in the level of satisfaction among enrollees in the three programs, while Table 8-5 presents the multivariate results. Here again, we focus on results that are significant in the multivariate analysis. First, we found that MHP enrollees were less satisfied than HAS enrollees with their ability to see the doctor of their choice. MHP enrollees also were less satisfied with the amount of time they had to wait to obtain an appointment and with the amount of time they had to wait in the office on the day of the appointment.

These results are important, because of their implications for the structure of the delivery system. HAS restricted access to a network of providers established by the two managed care plans participating in the program at the time of the survey. In theory, MHP offered unrestricted access to providers under a fee-for-service delivery system. In reality, however, the appearance of freedom-of-choice under a fee-for-service system was just an

Table 8-4

Level of Satisfaction Among Demonstration Participants: Medicaid Expansion Demonstration

	Maine Health Program (n=427)	South Carolina Health Access Plan (n=316)	Washington Health Access Spokane (n=194)
Satisfaction with ability to see doctor of choice			
Very satisfied	51.3 %[a, b]	62.5 %	65.0 %
Satisfied	44.0	30.3	28.0
Very unsatisfied/unsatisfied	4.7	7.2	7.0
Satisfaction with night/weekend care			
Very satisfied	36.7 [a, b]	48.0	46.4
Satisfied	51.7	46.7	44.0
Very unsatisfied/unsatisfied	11.6	5.3	9.6
Satisfaction with medical advice given			
Very satisfied	43.7	45.2	48.8
Satisfied	48.0	47.5	46.4
Very unsatisfied/unsatisfied	8.3	5.2	4.8
Satisfaction with travel time to doctor			
Very satisfied	44.4 [b]	45.2 [c]	53.9
Satisfied	52.5	52.1	44.2
Very unsatisfied/unsatisfied	3.1	2.7	1.9
Satisfaction with waiting time for appointment			
Very satisfied	29.0 [a, b]	37.0	45.1
Satisfied	60.4	56.8	47.6
Very unsatisfied/unsatisfied	10.6	6.2	7.3
Satisfaction with office waiting time			
Very satisfied	21.9 [b]	27.2 [c]	41.0
Satisfied	62.9	62.5	54.6
Very unsatisfied/unsatisfied	15.2	10.3	4.4
Satisfaction with overall quality of care			
Very satisfied	47.2 [a, b]	53.8	57.6
Satisfied	48.9	43.0	40.9
Very unsatisfied/unsatisfied	3.9	3.2	1.5
Satisfaction with cost of medical care			
Very satisfied	44.5 [a, b]	61.2 [c]	78.0
Satisfied	51.0	37.2	20.4
Very unsatisfied/unsatisfied	4.5	1.6	1.6

NOTES:

[a] Maine significantly different from South Carolina ($p<0.05$).

[b] Maine significantly different from Washington ($p<0.05$).

[c] South Carolina significantly different from Washington ($p<0.05$).

SOURCE: Medicaid Expansion Demonstration Household Survey.

Table 8-5

Determinants of Satisfaction with Medical Care Provided in the Medicaid Expansion Demonstration

Variable	Satisfaction with							
	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Intercept	-0.34	-1.10 *	-1.03 *	-0.85	-1.41 **	-2.41 ***	-0.52	0.00
	(0.53)	(0.61)	(0.59)	(0.52)	(0.56)	(0.61)	(0.52)	(0.54)
Age	0.03 ***	0.02 *	0.02 ***	0.01	0.01 *	0.03 ***	0.02 ***	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Gender (1=Male)	-0.60 ***	-0.23	-0.14	-0.29 *	-0.47 ***	-0.05	-0.31 *	-0.36 **
	(0.17)	(0.20)	(0.18)	(0.16)	(0.18)	(0.19)	(0.17)	(0.17)
Race (1=White)	0.35	0.58 *	0.44	0.78 ***	0.75 ***	0.54 *	0.39	1.35 ***
	(0.27)	(0.33)	(0.33)	(0.26)	(0.28)	(0.30)	(0.26)	(0.27)
Education (1=High School Graduate or Higher)	0.10	0.15	0.05	0.41 **	0.24	0.54 **	0.56 ***	0.24
	(0.21)	(0.25)	(0.25)	(0.20)	(0.23)	(0.25)	(0.21)	(0.21)
Poverty Status (1=Above poverty)	-0.18	-0.21	-0.04	0.01	0.12	0.28	-0.12	-0.22
	(0.19)	(0.23)	(0.20)	(0.18)	(0.20)	(0.21)	(0.19)	(0.19)
Employment Status								
Full-time	0.07	-0.16	-0.01	0.06	-0.06	-0.20	-0.45 **	0.07
	(0.23)	(0.27)	(0.25)	(0.22)	(0.24)	(0.26)	(0.23)	(0.25)
Part-time	0.04	-0.13	0.04	0.09	0.00	-0.04	-0.46 **	-0.03
	(0.22)	(0.25)	(0.24)	(0.21)	(0.23)	(0.24)	(0.22)	(0.22)
Not working (omitted)								

Table 8-5 (continued)

Determinants of Satisfaction with Medical Care Provided in the Medicaid Expansion Demonstration

	Satisfaction with							
Variable	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Self-Reported Health Status								
Very Good	0.14	0.11	0.01	-0.37	0.11	0.14	-0.02	0.35
	(0.24)	(0.27)	(0.26)	(0.23)	(0.24)	(0.25)	(0.23)	(0.24)
Good	-0.42 *	-0.20	-0.22	-0.43 *	-0.09	-0.16	-0.45 *	-0.39
	(0.25)	(0.29)	(0.27)	(0.23)	(0.25)	(0.28)	(0.25)	(0.24)
Fair/Poor	-0.09	-0.09	-0.14	-0.51 *	-0.33	-0.07	-0.38	-0.19
	(0.30)	(0.34)	(0.34)	(0.28)	(0.30)	(0.33)	(0 30)	(0.30)
Excellent (omitted)								
Physical health interferes with social activities	0.13	0.08	-0.02	0.17	-0.25	0.08	-0.40 *	-0.15
	(0.22)	(0.25)	(0.24)	(0.21)	(0.22)	(0.22)	(0.22)	(0.22)
Mental health interferes with social activities	-0.49 **	-0.44 *	-0.76 ***	-0.35 *	-0.18	-0.10	-0.12	-0.25
	(0.21)	(0.25)	(0.24)	(0.21)	(0.23)	(0.23)	(0.22)	(0.22)
Health limits light activities	-0.40	0.03	-0.15	0.37	0.29	0.02	-0.49 *	-0.10
	(0.28)	(0.32)	(0.31)	(0.28)	(0.31)	(0.30)	(0.29)	(0.29)
Demonstration program								
Maine	-0.47 **	-0.32	-0.10	-0.23	-0.50 **	-0.69 ***	-0.25	-1.57 ***
	(0.22)	(0.24)	(0.23)	(0.21)	(0.22)	(0.23)	(0.21)	(0.24)
South Carolina	0.07	0.39	0.02	-0.13	-0.16	-0.40	0.13	-0.55 *
	(0.25)	(0.28)	(0.26)	(0.23)	(0.24)	(0.26)	(0.24)	(0.29)
Washington (omitted)								
R-square	**0.08**	**0.04**	**0.05**	**0.04**	**0.05**	**0.06**	**0.07**	**0.15**
n	**851**	**591**	**969**	**873**	**829**	**844**	**857**	**872**
chi-square	**71.87**	**21.76**	**32.01**	**36.75**	**46.32**	**49.57**	**63.83**	**141.96**

*p<0.10 **p<0.05 ***p<0.01

SOURCE: Medicaid Expansion Demonstration Household Survey.

appearance, given the unwillingness of many providers to participate in Medicaid. Differences in the level of satisfaction with regard to provider choice seem to reflect an anomaly of Medicaid managed care – restricting freedom of choice through a private managed care provider network can actually expand access for Medicaid beneficiaries.

The multivariate analyses also revealed that enrollees in Maine and South Carolina were less satisfied with the cost of medical care than those in Washington. This result seems surprising in the case of the Medicaid Expansion Demonstration, in which all three programs offered generous benefits particularly in comparison to commercial insurance policies. However, some SCHAP enrollees were required to share in the cost of premiums with their employers. And in Maine, "transitional" enrollees were required to pay a premium for ongoing coverage amounting to 1.5 to 2.0 percent of income (depending on income level). Moreover, both SCHAP and MHP imposed limits on certain benefits that could have resulted in additional out-of-pocket outlays, relative to HAS.

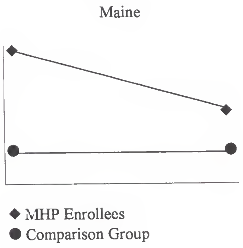
Other aspects of satisfaction were not found to differ significantly among the three programs, once we controlled for demographic and especially health status characteristics. In particular, we conclude that there were no differences in perceived quality of care across the three programs.

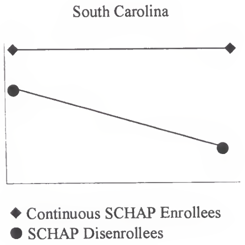
8.2 Impact of Insurance Transitions on Access and Satisfaction

8.2.1 Analytic Approach

The longitudinal nature of the survey in Maine and South Carolina enabled us to model the impact of changes in insurance coverage on access and satisfaction. We were able to take advantage of two "natural experiments" in this analysis. In Maine, the demonstration ended between the time 1 and time 2 surveys. We compare patterns of access and satisfaction over two points in time among demonstration enrollees (most of whom became uninsured) and our comparison group (most of whom were continuously uninsured across the two waves of the survey). In South Carolina, many of those who were enrolled in the demonstration at time 1 had disenrolled from the survey by time 2. Thus, our comparison in South Carolina is between those who were continuously enrolled and those who disenrolled.

Although both analyses capture the impact of losing demonstration coverage, the comparisons take a different conceptual form. Graphically, these comparisons can be depicted as follows:





In Maine, the comparison is relative to those who are uninsured and in South Carolina, the comparison is relative to those who are continuously insured. Thus, in Maine, loss of insurance implies a *convergence* towards the level of access or satisfaction in the uninsured population, whereas in South Carolina, disenrollment is hypothesized to result in a *divergence* from the level of access and satisfaction among continuous enrollees.

The analysis includes both descriptive and multivariate approaches. Descriptive data are presented showing unadjusted time 1 and time 2 measures of access and satisfaction. For each group, we show a "gross" difference between time 1 and time 2.

We performed multivariate analysis, using a difference-of-difference approach, to control for variables that would confound the outcomes over time. The multivariate analysis controlled for age, gender, race, education, employment, poverty status, and health status (overall health status, physical health and mental health limitations, and functional status). Appendix Tables 8-1 through 8-4 present the coefficients on the difference-of-difference equations (See Appendix A.) The significance levels from the regression analysis are summarized in conjunction with the descriptive results.

8.2.2 Impact of the Termination of the Maine Health Program

Our longitudinal analysis of the Maine Health Program depicts the impact of insurance transitions following the termination of the demonstration. We began with an "experimental group" of demonstration enrollees, two-thirds of whom became uninsured following the end of the program. The comparison group was uninsured at time 1, and at the time the second survey was fielded, three-fourths remained uninsured, as shown below:

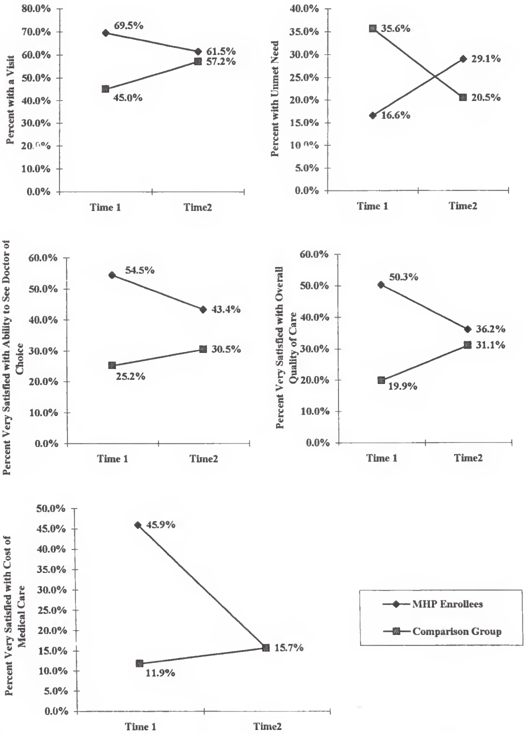
Time 2 Insurance Status	MHP Enrollees	Comparison Group
Uninsured	65.1%	77.4%
Medicaid	11.3	7.0
Medicare	2.0	0.9
Private Insurance	19.6	10.8
Other	2.0	4.0

As can be seen in Figure 8-1, the MHP enrollee group consistently had higher levels of access and satisfaction at time 1 than the uninsured comparison group. For example, 17 percent of the enrollee group reported any unmet need at time 1, compared with 36 percent of the comparison group. Similarly, the MHP enrollee group was far more likely than the comparison group to report being very satisfied with the overall quality of care (50 percent versus 20 percent) or with the cost of medical care (46 percent versus 12 percent). These results are consistent with pervious research which found the uninsured less likely than the insured to seek care. Indeed the uninsured had about half the nonemergency ambulatory visits as those who were insured (Spillman, 1992; Hahn, 1994).

The focus of this analysis, however, is not on cross-sectional differences between the enrollee and comparison groups, but rather, on the longitudinal patterns of change. If the loss of demonstration coverage had a measurable impact, we hypothesized that MHP enrollees

Figure 8-1

Changes in Access and Satisfaction Following Termination of the Maine Health Program (MHP)



would experience a significant loss of access or satisfaction over time, and that this loss would be greater than the change experienced by the comparison group.

No significant differences were observed in the likelihood of a hospitalization (Table 8-6). This is not surprising, given the non-discretionary nature of inpatient hospital care. We observed significant reductions in the likelihood of an ambulatory visit in the past three months, and more specifically, the likelihood of a non-hospital-based visit, following the termination of MHP (Table 8-6; Figure 8-1). For example, 70 percent of MHP enrollees had an ambulatory visit in the past three months when they were enrolled, but the rate declined to 62 percent following the termination of the demonstration (a difference of 8 percentage points). On the other hand, within the comparison group, we observe an increase of 12 percentage points over time in the likelihood of a visit (from 45 percent to 57 percent). These differential patterns were significant in the multivariate analysis.

Interestingly, on many of the measures, we see an "improvement" in access within the comparison group at the same time we see a deterioration within the enrollee group. This is perhaps most vivid in the patterns of unmet need over time. For example, 16 percent of MHP enrollees reported unmet need at time 1 increasing to 29 percent at time 2 (after the program ended), while the level of unmet need in the comparison group declined from 36 percent to 21 percent.

What happens to satisfaction over time within the two groups? Here again, we see a deterioration in the enrollee group and a slight improvement in the comparison group. This relationship holds for almost all measures of satisfaction included in the analysis (Table 8-7;

Table 8-6

Longitudinal Comparison of Access to Care in Maine

	MHP Enrollees			Comparison Group			
	Time 1	Time 2	Difference	Time 1	Time 2	Difference	Difference of Difference
Percent who stayed in hospital overnight or longer in the past year	13.0 %	12.1 %	-0.9 %	6.1 %	10.0 %	3.9 %	N.S.
Percent with ambulatory visit in past three months							
Any visit	69.5	61.5	-8.0	45.0	57.2	12.2	***
Emergency room	25.9	21.5	-4.4	21.3	20.7	-0.6	N.S.
Outpatient hospital	30.1	23.2	-6.9	17.0	30.1	13.1	***
Other place	57.4	45.0	-12.4	25.0	37.4	12.4	***
Percent with preventive visit in the past year							
Routine physical	61.6	52.8	-8.8	31.8	35.7	3.9	*
Dental visit	86.9	26.0	-60.9	17.0	28.1	11.1	**
Percent who did not get needed medical care in previous year	16.6	29.1	12.5	35.6	20.5	-15.1	***

N.S. = Not significant.
*$p<0.10$
**$p<0.05$
***$p<0.01$

SOURCE: Medicaid Expansion Demonstration Household Survey.

Table 8-7

Longitudinal Comparison of Satisfaction with Care in Maine

	MHP Enrollees			Comparison Group			
	Time 1	Time 2	Difference	Time 1	Time 2	Difference	Difference of Difference
Satisfaction with ability to see doctor of choice							
Very satisfied	54.5 %	43.4 %	-11.1 %	25.2 %	30.5 %	5.3 %	***
Satisfied	41.1	44.6	3.5	49.0	48.5	-0.5	
Very unsatisfied/unsatisfied	4.3	12.0	7.7	25.7	20.9	-4.8	
Satisfaction with night/ weekend care							
Very satisfied	39.4	22.6	-16.8	6.5	16.4	9.9	***
Satisfied	48.5	61.9	13.4	73.0	66.3	-6.7	
Very unsatisfied/unsatisfied	12.1	15.5	3.4	20.5	17.3	-3.2	
Satisfaction with medical advice given over the telephone							
Very satisfied	45.6	28.2	-17.4	16.2	22.6	6.4	***
Satisfied	47.1	57.3	10.2	63.1	57.7	-5.4	
Very unsatisfied/unsatisfied	7.2	14.5	7.3	20.7	19.7	-1.0	
Satisfaction with travel time to doctor							
Very satisfied	46.7	34.5	-12.2	19.4	27.0	7.6	***
Satisfied	51.0	61.7	10.7	68.8	66.2	-2.6	
Very unsatisfied/unsatisfied	2.3	3.8	1.5	11.9	6.8	-5.1	
Satisfaction with waiting time for appointment							
Very satisfied	30.0	29.2	-0.8	11.5	16.1	4.6	N.S.
Satisfied	61.2	64.3	3.1	67.0	71.0	4.0	
Very unsatisfied/unsatisfied	8.8	6.5	-2.3	21.5	12.9	-8.6	
Satisfaction with doctor office waiting time							
Very satisfied	24.3	25.7	1.4	9.4	18.3	8.9	*
Satisfied	61.4	62.7	1.3	56.3	59.8	3.5	
Very unsatisfied/unsatisfied	14.3	11.6	-2.7	34.3	21.8	-12.5	
Satisfaction with overall quality of care							
Very satisfied	50.3	36.2	-14.1	19.9	31.1	11.2	***
Satisfied	46.7	57.8	11.1	59.2	56.0	-3.2	
Very unsatisfied/unsatisfied	3.0	6.0	3.0	20.8	12.8	-8.0	
Satisfaction with cost of medical care							
Very satisfied	45.9	15.7	-30.2	11.9	15.7	3.8	***
Satisfied	51.0	46.0	-5.0	30.7	10.1	-20.6	
Very unsatisfied/unsatisfied	3.1	38.3	35.2	57.5	74.2	16.7	

N.S. = Not significant. *p<0.10 **p<0.05 ***p<0.01

SOURCE: Medicaid Expansion Demonstration Household Survey.

Figure 8-1). For example, the MHP enrollee group had an 11 percentage point reduction in the likelihood of being satisfied with their ability to see a doctor of their choice, while the comparison group had a 5 percentage point increase. In losing their insurance card, MHP enrollees may have experienced a disruption in the continuity of care, perhaps having to seek care from a clinic or hospital. The comparison group, on the other hand, may have found their provider relationships more acceptable over time. Nevertheless, it should be noted that those who were previously enrolled in MHP remain more satisfied at time 2 than the comparison group with their ability to see the provider of choice.

With respect to overall satisfaction with the quality of care and cost of care (Figure 8-1), we see a substantial reduction in the level of satisfaction among those who were previously enrolled in MHP, becoming equivalent to the level observed in the comparison group at time 2. Reductions in the level of satisfaction with the quality of care may in part be a function of dissatisfaction with their choice of providers once they lost their Medicaid card.

Thus, we conclude that the termination of the MHP demonstration has resulted in reduced rates of ambulatory care utilization, increased levels of unmet need, and lower levels of satisfaction. Indeed, the level of unmet need following termination of MHP exceeded that in the comparison group. Although it was not surprising to find reductions in access and satisfaction in the enrollee group following termination of MHP, we were surprised to observe improvements in the comparison group – most of whom were continuously uninsured during the study period.

To what do we attribute this improvement in the comparison group? We know that some of the comparison group obtained insurance between time 1 and time 2, but this does not explain the phenomenon, because the pattern persisted even when we included only those who were continuously uninsured. One possibility is that the comparison group of predominantly uninsured individuals "rations" its care over time. We speculate that by the second year of the survey, the comparison group has an increased likelihood of obtaining care (relative to time 1) because their health status has deteriorated to the point where they can no longer afford to delay care.

Another possible explanation is that relative expectations were lower in the comparison group, so that their perceptions could only increase, while those in the MHP enrollee group had higher expectations, which could only decrease. This phenomenon would in part explain the convergence between the enrollee and comparison groups.

8.2.3 Impact of Disenrollment from the South Carolina Health Access Plan

This analysis takes advantage of a "natural experiment" in which we interviewed SCHAP enrollees approximately 18 months into the demonstration, and then reinterviewed them one year later. A total of 242 SCHAP members were interviewed in the two surveys, of whom 181 were continuously enrolled in SCHAP, and 61 had disenrolled from SCHAP by the second survey. This analysis compares levels of access and satisfaction over the two points in time, to determine the impact of disenrollment. As with the MHP analysis, a difference-of-difference approach was used to determine which patterns were significant.

Table 8-8 presents access measures for the continuous SCHAP enrollees and disenrollees. As we observed for Maine above, there was no difference in the likelihood of hospitalization following disenrollment, due to the non-discretionary nature of most inpatient stays. Utilization of ambulatory care, however, declined sharply following disenrollment (Figure 8-2). A slight increase in the likelihood of an ambulatory visit among continuous enrollees occurred between time 1 (56 percent) and time 2 (65 percent), in contrast to a precipitous drop among disenrollees from 60 percent to 39 percent. Likewise, unmet need increased substantially for those who disenrolled (from 18 percent to 33 percent), while the rate actually declined over time for those who remained enrolled (from 20 percent to 8 percent). In other words, disenrollees were four times more likely to report unmet need at time 2 compared to continuous enrollees.

Table 8-9 compares levels of satisfaction between continuous enrollees and disenrollees. Only two measures were significantly different between the two time periods. Surprisingly, SCHAP disenrollees exhibited a sharp decline in satisfaction with the availability of medical advice over the telephone (from 52 percent to 27 percent), while the level of satisfaction was constant among continuous enrollees (about 50 percent). This may be a function of their loss of the primary care coordinator relationship, which offered more telephone access than might be available from a freestanding clinic or hospital outpatient department. Not surprising, yet dramatic, was the decline in satisfaction with costs of care

Table 8-8

Longitudinal Comparison of Access to Care in South Carolina

	SCHAP Continuous Enrollees			SCHAP Disenrollees[a]			
	Time 1	Time 2	Difference	Time 1	Time 2	Difference	Difference of Difference
Percent who stayed in hospital overnight or longer in the past year	5.5%	6.5%	1.0%	9.4%	9.1%	-0.3%	N.S.
Percent with any ambulatory visit in past three months	55.8	65.0	9.2	59.5	39.2	-20.3	**
Emergency room	14.5	11.3	-3.2	12.2	13.4	1.2	N.S.
Outpatient hospital	16.2	18.2	2.0	12.4	11.0	-1.4	N.S.
Other place	41.2	47.4	6.2	42.5	30.0	-12.5	**
Percent with preventive visit in the past year							
Routine physical	40.5	50.0	9.5	42.1	35.9	-6.2	N.S.
Dental visit	36.1	43.0	6.9	36.9	34.2	-2.7	**
Percent who did not get needed medical care in previous year	19.6	8.3	-11.3	17.9	32.5	14.6	***

[a] These individuals were enrolled during the Time 1 Survey but disenrolled prior to the Time 2 Survey.

N.S. = Not significant.
*p<0.10
**p<0.05
***p<0.01

SOURCE: Medicaid Expansion Demonstration Household Survey.

Figure 8-2

Changes in Access and Satisfaction Following Disenrollment from the South Carolina Health Access Plan (SCHAP)

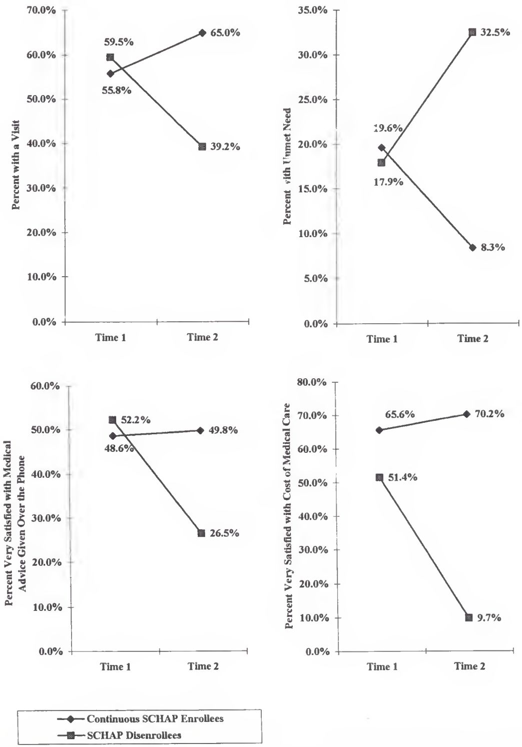


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Table 8-9

Longitudinal Comparison of Satisfaction with Care in South Carolina

	SCHAP Continuous Enrollees			SCHAP Disenrollees*			
	Time 1	Time 2	Difference	Time 1	Time 2	Difference	Difference of Difference
Satisfaction with ability to see doctor of choice							
Very satisfied	67.5 %	59.1 %	-8.4 %	52.5 %	35.5 %	-17.0 %	N.S.
Satisfied	27.1	38.5	11.4	39.9	48.4	8.5	
Very unsatisfied/unsatisfied	5.4	1.4	-4.0	7.6	9.7	2.1	
Satisfaction with night/ weekend care							
Very satisfied	52.9	42.4	-10.5	52.9	22.9	-30.0	N.S.
Satisfied	43.2	53.1	9.9	43.9	58.5	14.6	
Very unsatisfied/unsatisfied	3.9	3.1	-0.8	3.2	11.2	8.0	
Satisfaction with medical advice given over the telephone							
Very satisfied	48.6	49.8	1.2	52.2	26.5	-25.7	**
Satisfied	47.0	46.5	-0.5	39.1	63.4	24.3	
Very unsatisfied/unsatisfied	4.4	3.7	-0.7	8.7	3.7	-5.0	
Satisfaction with travel time to doctor							
Very satisfied	47.6	50.9	3.3	39.3	35.8	-3.5	N.S.
Satisfied	50.1	46.6	-3.5	59.3	55.0	-4.3	
Very unsatisfied/unsatisfied	2.3	2.5	0.2	1.4	7.5	6.1	
Satisfaction with waiting time for appointment							
Very satisfied	38.9	39.5	0.6	27.7	25.5	-2.2	N.S.
Satisfied	55.4	53.9	-1.5	62.3	63.8	1.5	
Very unsatisfied/unsatisfied	5.7	6.6	0.9	10.0	10.7	0.7	
Satisfaction with office waiting time							
Very satisfied	31.3	33.3	2.0	23.1	20.8	-2.3	N.S.
Satisfied	58.0	59.2	1.2	68.3	62.0	-6.3	
Very unsatisfied/unsatisfied	10.7	7.5	-3.2	8.6	13.6	5.0	
Satisfaction with overall quality of care							
Very satisfied	58.8	58.9	0.1	39.6	34.2	-5.4	N.S.
Satisfied	38.4	39.2	0.8	58.9	62.0	3.1	
Very unsatisfied/unsatisfied	2.8	1.8	-1.0	1.5	2.4	0.9	
Satisfaction with cost of medical care							
Very satisfied	65.6	70.2	4.6	51.4	9.7	-41.7	***
Satisfied	33.6	28.4	-5.2	46.8	37.2	-9.6	
Very unsatisfied/unsatisfied	0.8	1.4	0.6	1.8	53.0	51.2	

* These individuals were enrolled during the Time 1 Survey but disenrolled prior to the Time 2 Survey.

SOURCE: Medicaid Expansion Demonstration Household Survey.

among disenrollees. Whereas half of the disenrollees were very satisfied at time 1, only 10 percent were very satisfied at time 2 (following disenrollment from SCHAP). Among continuous enrollees, levels of satisfaction were consistently higher (66 percent at time 1 and 70 percent at time 2).

There can be no question that disenrollment from SCHAP has resulted in lower levels of utilization and higher levels of unmet need, similar to what we observed in Maine. Moreover, disenrollees experienced a profound reduction in their level of satisfaction with the costs of care. This occurred despite the fact that many SCHAP disenrollees obtained insurance either through a spouse's employer or through a new employer when they changed jobs. The high level of satisfaction among enrollees is a testament to the depth and breadth of SCHAP coverage, relative to traditional commercial insurance policies.

8.3 Lessons Learned

This analysis leads to two basic conclusions about the impact of the Medicaid Expansion Demonstration on access to and satisfaction with care. The cross-sectional comparison has shown that the structure of the service delivery system coupled with the aggressiveness of program management can affect levels of access and satisfaction. The longitudinal analysis has shown that the loss of insurance coverage can have significant negative consequences for access and satisfaction.

The capitated managed care system under HAS performed relatively more favorably than the other two programs. Of particular note were the lower levels of hospital-based ambulatory care and higher levels of office-based care in Washington, relative to the other two programs. This is likely a function of the gatekeeper incentives in HAS. Satisfaction also tended to be higher in the capitated system than in the fee-for-service system. This supports previous research by Sisk *et al.* (1996) that found favorable results for New York's Medicaid managed care program relative to fee-for-service.

SCHAP instituted a PCCM program which also had a gatekeeper component; however, we surmise that the aggressive management of utilization and costs by SCHAP staff contributed to lower levels of utilization overall. This is consistent with reports of significantly higher levels of unmet need among SCHAP enrollees. Interestingly, we observed that levels of unmet need declined among continuous SCHAP enrollees between the time 1 and time 2 surveys (recall Figure 8-2). This suggests that SCHAP staff were less vigorous in their management of utilization and costs as the SCHAP program became more established, or alternatively, that the "warning" lost their effect over time. These findings are consistent, too, with the utilization and cost results reported in Chapter 6, which showed an upward trend over the three years. Both the survey and administrative data analyses support the hypothesis that SCHAP staff became less vigilant (or less effective) in their monitoring and follow-up of SCHAP enrollees over time, which contributed to increases in utilization and reductions in perceptions of unmet need.

Unfortunately, our study could not model the impact of obtaining insurance coverage, due to lack of a baseline non-enrolled population that could be followed after the demonstration was implemented. Thus, we conducted longitudinal analyses showing the impact of the loss of insurance coverage on access and satisfaction. The likelihood of obtaining ambulatory care, specifically in a non-hospital-based setting, declined after coverage was terminated. Concurrently, the likelihood of experiencing unmet need substantially increased. Satisfaction with the cost of medical care dropped precipitously, following termination of MHP or disenrollment from SCHAP.

In sum, we conclude that the demonstration served to eliminate financial barriers to care, and thereby reduced levels of unmet need. This was achieved largely by improving access to ambulatory care, especially in non-hospital based settings.

9

Employer Participation in the Medicaid Expansion Demonstration

All three demonstration programs included provisions for employer participation in their original plans, but the approach differed in each demonstration and the extent to which employer participation was achieved differed significantly between Maine and Washington on one hand and South Carolina on the other. The Maine Health Plan (MHP) intended to subsidize the cost of employer plans where available, and if the program staff determined that it would be less expensive than paying for care directly. In Maine, a few beneficiaries received this subsidy, but the number was negligible.

Washington's Health Access Spokane (HAS) intended to ask the employer of eligible HAS beneficiaries to contribute to the premium HAS paid to the two participating HMOs. Thus, the State hoped to find private employers who would subsidize HAS. The employer subsidy was never implemented because of program staff concerns about the temporary duration of HAS and the potential conflict that could be created if the employer paid for some workers but not others.

Unlike MHP and HAS, which enrolled *individual* beneficiaries and families, the South Carolina Health Access Plan (SCHAP) enrolled *only* eligible employees (and their dependents) of eligible, participating businesses. Because employer participation was a fundamental component of SCHAP but only peripheral to MHP and HAS, the remainder of this chapter focuses exclusively on SCHAP.

9.1 Motivation

Because enrollment of individuals was conditional on the willingness of employers to seek participation and their ability to meet the very stringent eligibility criteria, understanding SCHAP enrollment requires an understanding of employer participation. Employers were eligible for SCHAP if they were located in Horry and Marion Counties, had more than two and fewer than 100 employees, and had not offered health insurance within the last 12 months at the time they applied. Upon applying, at least 50 percent of the employees of the firm must have been eligible to enroll and at least three must have actually enrolled.

Employees were eligible if they had family incomes below 150 percent of FPL ($21,525 for a family of four in 1994 and $23,400 in 1996), were permanent residents of South Carolina (any county), were employed at least 30 hours per week and nine months per year, were less than 65 years of age, and were not covered by other health insurance. If the employer chose to offer family coverage, dependents had to meet the same criteria except for minimum hours and months worked. The limits on number of employees (3-100) were applied to the entire enterprise, so that local establishments of large chains did not qualify.

This chapter addresses four important questions about employer participation in SCHAP:

1. How did employers learn about SCHAP?
2. What kind of employers enrolled in SCHAP and how did they differ from employers that did not join SCHAP?
3. How did participating employers assess their experience with SCHAP?
4. What impact did SCHAP have on the private market for small business insurance?

9.2 Data and Methods

The analyses presented in this chapter are based on case study interviews with SCHAP staff and Board members, participating employers, non-participating employers, and local health insurance brokers; administrative data supplied by SCHAP; and a survey of employers. The survey was conducted using computer-assisted telephone interviewing (CATI) from June through September 1994. We successfully interviewed all 123 employers who were participating in SCHAP at that time. One had disenrolled by the time of the survey leaving 122 interviews for analysis.

We also interviewed a sample of non-participating employers to serve as a comparison group. A sample of employers with 3-20 employees in Horry and Marion Counties was drawn from a list obtained from Dun & Bradstreet. Comparison group members were screened for potential SCHAP eligibility to achieve a sample of employers that would have been eligible for SCHAP, but who were not participating. Because of SCHAP's extensive eligibility criteria, it was impossible to determine in our screening if employers were truly eligible for SCHAP, so the screening criteria were an approximation of eligibility, based on location, number of full-time employees, and number of low-wage employees. Of the 3,660 establishments in these two counties meeting the initial size criterion, we selected a sample of 1,701 and classified 1,610 (94.7 percent) as respondents. These 1,610 respondents yielded 104 employers who met the eligibility criteria and who, therefore, constitute our comparison group. More detail on the survey design may be found in Chapter 3.

Survey data estimates were derived using the sampling weights. In addition, SUDAAN software was used to correct the variances of the estimates, and hence the statistical tests of significance, for the effects of unequal weights from stratification. Although we interviewed all participating employers, we are treating them in the bivariate and multivariate analyses as if they are a sample from a "super-population" of all employers who might consider joining SCHAP. Had we treated them as a census, they would contribute no variance to the statistical tests and almost every explanatory variable would be significant. By treating them as a sample, they contribute variance, but the small sample sizes mean that the variances are relatively large, making it difficult to find significance. With larger samples, we would normally limit our significance criterion to p-values less than 0.05, but to compensate for the small sample, we are treating coefficients with p-values less than 0.10 as significant in the following discussion. Because the full sample of eligible nonparticipating employers in the comparison group is small (n=104), results reported for the 40 percent who recalled hearing about SCHAP should be used cautiously.

9.3 Effectiveness of Marketing and Outreach

SCHAP was marketed to employers through a variety of mechanisms. Initially, it relied heavily on word of mouth, on newspaper, radio, and television coverage of its grand opening event, and on news releases provided by the Governor's office. The SCHAP staff eventually added public service announcements for radio; participation in radio and television talk shows; mail solicitation using a list of firms obtained from Dun & Bradstreet; newspaper advertisements; signs posted in the windows of pharmacies, participating physicians' offices, and participating work sites ; and calls to firms identified in the Yellow Pages. SCHAP also provided a toll-free telephone line for inquiries.

Data on marketing contacts supplied by SCHAP provide some interesting insights into the effectiveness of marketing efforts. SCHAP contacted or was contacted by 2,161 firms through May 5, 1995 (26 months into the 36 month demonstration period); 173 (8 percent) met the eligibility criteria and enrolled. Of the contacts, 813 (38 percent) were initiated by the employer and 1,448 (62 percent) by SCHAP using lists of prospects obtained from several sources. Among the 813[1] employers who contacted SCHAP, 15 percent were eligible and enrolled, but only 3 percent of the contacts initiated by SCHAP resulted in enrollment. Thus, 120 of the 173 enrolled firms initiated contact with SCHAP. Compared to firms that were contacted by SCHAP staff, the probability of enrollment was five times greater among firms that initiated contact with SCHAP. This differential was expected, because employers who contacted SCHAP were more interested in enrollment than average. Nevertheless, the percentage of eligible employers in both groups was low (15 and 3 percent) which reflects SCHAP's strict eligibility criteria.

Of the 2,161 firms contacted through the first 26 months of the demonstration, 78 percent were contacted in the first six months. This pattern suggests that the staff had saturated the market with SCHAP-initiated contacts early in the program, had exhausted most of the available firms, and had come to recognize that "cold" marketing was not very productive. Based on our sampling frame specifications, we estimate that there were 3,660 employers with 3-100 workers in Horry and Marion Counties. Almost 900 employers contacted SCHAP during the demonstration (including ineligible employers who had fewer than 3 or more than 100 employees), so 25 percent would be an upper limit on the percentage of employers in this size group that were interested enough to contact SCHAP.

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[1] This number increased to 873 by the time SCHAP closed enrollment.

In our survey, nonparticipating employers were asked if they had heard of SCHAP before our interview. Those nonparticipants who had heard of SCHAP, as well as all of the participating employers, were asked about where they had heard of SCHAP. They were asked separately about personal and media sources of information.

Based on these survey data, we estimate that 40 percent of the potentially eligible nonparticipating employers had heard of SCHAP prior to our telephone interview. Given the extensive efforts made by SCHAP staff to contact potentially eligible firms, the fact that fewer than half recalled hearing of SCHAP before our interview seems disappointing. Yet, recall of mass media notices and cold marketing calls by 40 percent of the target population seems to be a respectable impact, given (1) the elapsed time between the marketing effort and the administration of our survey as well as (2) the likelihood that many of the contacts would have been made with someone other than our survey respondent.

Table 9-1 compares the sources of information about SCHAP reported by participants and nonparticipants who had heard of SCHAP. About 52 percent of the participants had heard about SCHAP from a personal source, such as another small business owner, a friend, or a relative, compared to only about 10 percent of the nonparticipants. Participants were almost twice as likely as nonparticipants to learn of SCHAP from a relative or friend and were only half as likely to have heard about it from some other person.

Among the 29 percent of employers who recalled learning of SCHAP through some form of media, newspapers were by far the most common source. Newspaper reports

Table 9-1

Sources of Information About SCHAP

	Total	Participants	Non-participants
Personal* **	25.8%	52.5%	9.5%
Friend/Relative	31.4	35.4	19.2
Another small business owner	37.1	38.5	33.1
SCHAP staff	4.3	3.1	8.1
Other Person*	27.8	21.5	46.6
Media **	29.0	40.2	22.1
Newspaper	61.2	69.2	49.6
TV/Radio/Billboard	9.6	7.7	12.4
Brochure***	19.6	0.0	47.8
Usefulness of Information Received* **			
Very useful	49.2	66.7	24.0
Somewhat useful	33.1	27.0	41.8
Not useful at all	17.8	6.4	34.1

NOTE: Chi-square test of significance for difference between Participants and Non-Participants: *p < .10, **p < .05, ***p < .01.

SOURCE: Medicaid Expansion Demonstration Employer Survey.

included both news articles and advertisements placed by SCHAP. Among the participants, 67 percent found the information they received about SCHAP was very useful and another 27 percent found it useful. As expected, nonparticipants were less likely to find the information they received useful.

It is interesting that almost half of the nonparticipants recalled learning of SCHAP through a brochure compared to none of the participants. Several months before our survey, SCHAP obtained a list of small employers in Horry and Marion Counties from Dun & Bradstreet and mailed a brochure and letter from the Governor to everyone on the list. The high percentage of comparison group members who reported seeing a brochure probably reflects our choice of a similar list from Dun & Bradstreet as our sampling frame for the comparison group. In contrast, most of SCHAP's *participating* employers enrolled before this mass brochure mailing. Thus, the core of employers who were interested in SCHAP and most likely to be eligible learned of it from the initial publicity and word-of-mouth that it generated. The mass mailing that followed generated little enthusiasm for SCHAP among the remaining firms that had not already investigated enrollment.

In sum, the findings on marketing and sources of information suggest that, as expected, there was a core of employers interested in obtaining health insurance; that early publicity and advertisements in newspapers and radio generated enough awareness and word-of-mouth to reach this group; and that general marketing efforts, such as the mass mailing of brochures and additional mass media later in the program, had limited value once that interested group was informed about the program.

9.4 Characteristics of Participating and Non-Participating Employers

The decision to purchase group health insurance is complex and often driven by the cost of coverage. SCHAP is an attempt to reduce the impact of cost on this decision by heavily subsidizing the premium and entirely eliminating health status of workers as a factor (although health status has been replaced with very stringent income-based eligibility criteria). In this section, we hypothesize a model of participation and look at the association of these factors with employer participation in two ways. First, we present bivariate tables that compare the means and proportions of these factors for the participants and the nonparticipating comparison group. These tables provide the basic description of how SCHAP participants differed from the rest of the population of potentially eligible employers.

Second, we present the results of a logistic regression model of choice behavior (participant or nonparticipant) to isolate the independent contribution of each factor. However, regression results based on all comparison group members would include those who said they had never heard of SCHAP (about 60 percent of the total) and, therefore, could not have joined even if they had wanted to. Therefore, we estimated the model on a sample comprised of all participants and the comparison employers who reported that they had heard of SCHAP before our interview. By including only employers who said they had heard of SCHAP, we are more confident that the results reflect employers' motivations.

9.4.1 Hypothesized Enrollment Factors

To describe firms that chose to join SCHAP and which factors played a significant role in the decision, we hypothesized that enrollment is a function of basic structural characteristics of the business, characteristics of the work force, family participation in the business, financial status of the business, and prior experience with health benefits. Each of these factors is described in turn.

Structural Characteristics of the Business. Structural characteristics, which include the type of ownership, type of industry, and corporate structure, are included to explore the propensity of certain types of businesses to participate. For example, nonprofit firms, which should not be emphasizing profit-maximization, might be more likely to offer insurance than for-profit firms.

Characteristics of the Work Force. Work force characteristics include the number of workers and their distributional composition; for example, the percentage of young workers, the percentage of older workers, and the percentage of women. Under the assumption that employers respond to the needs and demands of their employees, participation may be associated with employees' concerns about insurance. We would expect older employees and women to value health insurance more highly than younger employees and men.

Family Participation in the Business. It became apparent from case study interviews with employers that this was a potentially important factor in the decision to seek health insurance coverage for employees. We observed small businesses run by families, including spouses and parents of the owners, who had health benefits through previous employment and were quite concerned about their inability to obtain coverage in the private market. These workers were essentially middle income individuals who met the low-income criteria for SCHAP eligibility because of a personal choice to work in their own small business, but who had the skills and education to obtain a job that provided health benefits. For example, one employer had been an engineer with a large company before purchasing a small service business franchise and gave up coverage when he changed careers. We also conducted interviews at manufacturing and industrial firms that employ a significant number of low-wage, unrelated workers who had no option but to work in industries that rarely provide health benefits.

We expected that small businesses operated by traditionally middle income families would be more likely to join SCHAP because providing insurance for workers means covering one's family and because the work force had prior experience with employment-related health benefits and valued them highly. In contrast, we expected that businesses employing low-wage workers who were not related to the owner would be less likely to join SCHAP because employers felt little responsibility for workers beyond their jobs, workers had little experience with health benefits, and they needed the income in cash rather than benefits.

Operationalizing this concept for analysis is difficult because it is abstract and exploratory. We decided that the best indicator is the percentage of full-time employees who are family members of the owner. We explored alternative specifications for this variable based on the distribution of businesses by the percentage of the owner's family members who work in the business. In the following analysis, firms where at least 25 percent of the workers are related to the owner are called family businesses and firms with less than 25 percent are called employers of low-wage workers.

Financial Status of the Business. Other factors equal, firms that have more financial resources should be more willing to pay health insurance premiums for their workers. We asked several questions about financial status, but a high percentage of respondents refused to answer those concerning profit and dollar volume (e.g., total sales). We have adequate response to general assessment of financial status and debt levels. We also have data for factors that are related to financial status, including whether the firm offers a pension plan and whether the firm has experienced difficulty filling vacancies.

Prior Health Insurance Experience. Firms that have offered health benefits in the past should be more likely to offer them now, because they have demonstrated that they are not fundamentally opposed to the concept. In addition, we determined the extent of concern about not offering health benefits to employees and the extent to which employers were actively searching for insurance to determine if they would like to offer insurance, even if they have not been able to overcome barriers.

9.4.2 Descriptive Analysis

Structural Characteristics of the Business. Table 9-2 describes the participating and non-participating businesses in terms of type of business and corporate structure. SCHAP enrolled a fairly typical group of employers in the 3-100 employee size range. There was little meaningful difference between the two groups in ownership, industry, and corporate

Table 9-2

Characteristics of Businesses

	Total	Participants	Non-participants
Type of Ownership			
For profit	97.1%	94.3%	98.8%
Non profit	2.6	4.9	1.2
Government	0.3	0.8	0.0
Industry			
Agriculture	0.4	1.6	2.6
Mining	0.0	0.0	0.0
Construction	16.8	11.5	20.1
Manufacturing	4.1	4.9	3.6
Transportation	3.9	5.7	2.8
Wholesale trade	1.4	1.6	1.2
Retail trade	33.7	38.5	30.7
Finance, insurance, real estate	5.2	4.1	5.8
Other service	32.4	31.2	33.2
Public administration	0.3	0.8	0.0
Health care business*	4.3	0.8	6.4
Tourism business	40.1	45.1	37.0
Business has subsidiaries	5.0	5.8	4.5
Business is a subsidiary	3.3	4.2	2.7
Mean years in operation*	11.6	10.2	12.5

NOTE: Chi-square test of significance for difference between Participants and Non-Participants: *p < .10, **p < .05, ***p < .01.

SOURCE: Medicaid Expansion Demonstration Employer Survey.

structure. Both groups included the same percentage of firms in the tourism industry, but surprisingly, SCHAP enrolled a much smaller percentage of firms in the health care industry than expected (less than 1 percent compared to over 5 percent of nonparticipants). We had hypothesized that health care providers would be more sensitive to the value of health insurance, but either this was not the case or health care firms were more likely to be ineligible, possibly because the incomes of health care workers are too high to qualify for SCHAP. Participating firms had been in business for less time (about two years) than nonparticipants. We had expected older firms to be more likely to join because they would be more mature financially, although a two-year difference may not be meaningful in terms of financial maturity. In both groups, about 5 percent of firms had subsidiaries or divisions and a slightly smaller percentage were a subsidiary of another firm. As it intended, SCHAP enrolled small, local firms almost exclusively.

Characteristics of the Work Force. Table 9-3 describes SCHAP participants and nonparticipants in terms of the characteristics of their employees. Like the basic structural characteristics, the work force characteristics of the two groups were quite similar. There were no significant differences in the number of persons employed, the percentages who were over age 50 and under age 30, and the percentage who were single without dependents. The age of the work force in both groups was relatively young, with almost twice as many less than age 30 as age 50 or more. These data indicate that, in terms of both basic structural and work force characteristics, SCHAP enrolled a group of employers that matched the characteristics of the potentially eligible, but nonparticipating, employer population to a remarkable degree.

Table 9-3

Business Workforce Characteristics

	Total	Participants	Non-participants
Number of employed in Horry/Marion Counties (mean)	8.6	9.6	8.0
Distribution of firms by number of employees in Horry/Marion Counties			
Less than 3	0.5%	0.8%	0.0%
3 - 5	46.9	43.3	59.1
6 - 10	31.5	31.7	26.0
More than 10	22.1	24.2	14.9
Number of full-time workers enrolled in SCHAP (mean)	NA	473.0	NA
Distribution of firms by number of full-time workers enrolled in SCHAP			
Less than 3	NA	13.5	NA
3 - 5	NA	72.3	NA
6 - 10	NA	10.1	NA
More than 10	NA	4.2	NA
Percent of full-time employees over age 50 (mean)	17.3	16.2	18.0
Distribution of firms by percent of employees over age 50			
None	46.6	44.9	47.6
1 - 50%	45.4	46.6	44.7
More than 50%	8.0	8.5	7.8
Percent of full-time employees less than age 30 (mean)	32.6	29.0	34.7
Distribution of firms by percent of employees less than age 30			
None	29.4	24.8	32.2
1 - 50%	52.8	61.5	47.6
More than 50%	17.8	13.7	20.2

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Table 9-3 (continued)

Business Workforce Characteristics

	Total	Participants	Non-participants
Percent of full-time employees who are women (mean)***	36.3	48.6	28.8
Distribution of firms by percent of employees who are women***			
None	33.4	10.8	47.1
1 - 50%	34.8	44.2	29.1
More than 50%	31.9	45.0	23.9
Percent of full-time employees who are single with no dependents (mean)	28.1	29.3	27.3
Family participation*			
Family Business	37.6	46.2	32.5
Employer of Low Wage Workers	62.4	53.8	67.5

NA = Not applicable.

NOTE: Chi-square test of significance for difference between Participants and Non-Participants: *p < .10, **p < .05, ***p < .01.

SOURCE: Medicaid Expansion Demonstration Employer Survey.

Gender was the one demographic characteristic in which participants differed significantly from nonparticipants. About half the persons working for SCHAP participants were women compared to only about one-fourth of the workers of nonparticipants. This finding supports the hypotheses that women value health insurance more than men and their preferences for health insurance influence the firm's decision to offer it.

Family Participation in the Business. Table 9-3 also shows that, as expected, SCHAP participants were more likely to be family-owned businesses (46 percent) than nonparticipants (32 percent). This finding is consistent with the hypothesis that employers are more interested in insuring workers if the workers are family members than if they are unrelated. Despite SCHAP's ability to attract a significant proportion of employers of low-wage workers (over half the participants are in this category), SCHAP attracted fewer than one would expect based on their distribution in the population.

Financial Status of the Business. Table 9-4 compares the financial status of participating and nonparticipating firms. Presumably, firms in better financial condition will be more likely to accept the expense of health insurance benefits for employees. Respondents were asked to rate the financial status of their firms on a 4-point scale ranging from excellent to poor. The distributions were similar for both groups, except that participants were slightly more likely to report excellent financial status and slightly less likely to report poor financial status than nonparticipants.

Respondents were also asked about the level of debt their business currently had, as a secondary measure of financial health. High debt by itself does not indicate financial distress and it was impossible to collect specific debt ratios in this survey, so we expected it to be a

Table 9-4

Financial Status of Company

	Total	Participants	Non-participants
Financial status of company*			
Excellent	13.3%	16.2%	11.4%
Good	47.9	46.2	48.9
Fair	32.1	35.0	30.2
Poor	6.8	2.6	9.5
Amount of debt*			
High debt	15.6	13.2	17.1
Moderate debt	42.1	47.4	38.7
Little debt	27.1	29.8	25.2
No debt	15.3	9.7	18.9
Company provides employees with pension plan	2.9	1.7	3.7
Problems filling vacancies***	28.1	15.4	35.9

NOTE: Chi-square test of significance for difference between Participants and Non-Participants:
*p < .10, **p < .05, ***p < .01.

SOURCE: Medicaid Expansion Demonstration Employer Survey.

less valuable and consistent measure than the overall rating of financial status. In fact, we found this to be the case. The most interesting finding concerned reports of "no debt." Participants were about half as likely to report no debt as comparison employers, the reverse of what we expected to find.[2]

We expected that respondents would be more likely to offer health insurance if they also offered pensions. The percentage offering pensions in both groups was very low, as one would expect given the small number of workers employed by these businesses, and there was no difference between participants and nonparticipants.

Although it is not a financial measure in the strict sense, we asked employers about trouble filling vacancies under the assumption that those who were experiencing such problems might offer health benefits as an inducement. In fact, we found the reverse relationship. Almost 36 percent of comparison employers reported a problem compared to 15 percent of participants. There are three potential explanations for this relationship. First, difficulty filling vacancies might reflect other financial distress that would discourage participation. Second, participating employers were asked about problems at the time they joined SCHAP and comparison employers were asked about their current situation. Thus, the difference could be due to changes in the local employment climate over the two year period between the start of SCHAP enrollment and the time of the survey. Third, it is possible that participants misinterpreted the question and actually responded for their current status instead of their status just prior to joining SCHAP. If this were the case, we would expect SCHAP participants to have fewer problems filling vacancies than uninsured firms, which is exactly what we found.

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[2] Respondents were also asked for quantitative financial measures, including the number of years they showed a profit in the last three, total revenue last year, percent of revenue devoted to payroll, and average percentage wage increase last year, but item nonresponse was too high to report these results.

Prior Health Insurance Experience. We also hypothesized that employers who have offered health benefits previously would be more likely to offer SCHAP, because they have demonstrated and acted on a previous concern about insurance. We found that almost the same percentage of participants and nonparticipants had offered insurance in the past; 22 percent and 19 percent respectively (Table 9-5).

Although the percentage offering insurance in the past did not differ, the extent of prior worry about not offering health insurance was substantially different for the two groups. Participants were asked about their degree of worry just before they joined SCHAP and nonparticipants were asked about their current worry. Half the participants worried a lot about not offering insurance compared to only 20 percent of the nonparticipants. Similarly, only 11 percent of participants had no worry compared to 38 percent of nonparticipants. Finally, 48 percent of SCHAP participants had been actively searching for insurance at the time they joined SCHAP, but only 20 percent of nonparticipants were actively looking. At the other end of the continuum, 61 percent of comparison employers were not considering insurance compared to only 23 percent of SCHAP participants.

In general, there were no significant differences in the most important concerns about insurance benefits, except that participants were more likely than nonparticipants to report the benefits of "peace of mind".

The relationship between these variables and joining SCHAP are exactly as expected; certainly employers who are concerned about not offering insurance and who are actively

Table 9-5

Attitudes Toward Health Insurance

	Total	Participants	Non-participants
Percent that offered health insurance in the past	20.2%	22.1%	19.0%
Worry from not offering insurance* **			
A lot	32.0	50.8	20.0
Some	36.8	36.1	37.3
Hardly any	3.7	2.5	4.5
No worry at all	27.5	10.7	38.2
Total	100.0	100.0	100.0
Active search for insurance* **			
Actively looking	30.6	48.3	19.9
Thinking about it	22.3	28.3	18.6
Not considering insurance	47.1	23.3	61.5
Total	100.0	100.0	100.0
Most important concern about insurance benefits			
Cost to business	39.7	36.1	42.0
Cost to worker	26.0	21.3	29.0
Administrative and paperwork burden	16.6	15.6	17.2
Providing workers with peace of mind**	19.3	27.1	14.4

NOTE: Chi-square test of significance for difference between Participants and Non-Participants:
*p < .10, **p < .05, ***p < .01.

SOURCE: Medicaid Expansion Demonstration Employer Survey.

searching for coverage are more likely to find it. However, these data provide an important description of the population that has not joined SCHAP. More than half express at least some worry about not offering health insurance, but only one-fifth are actively looking and almost two-thirds have no interest.

9.4.3 Multivariate Analysis of Enrollment Factors

In sorting out which factors were most strongly associated with the decision to join SCHAP, it is important to consider the correlation among the variables we think might have an effect. We ran a multivariate logistic regression to identify the independent contribution of each factor.

As noted above, about 60 percent of the nonparticipating employers had not heard of SCHAP before the interview, so we estimated the model for a sample that included all participants but only those nonparticipants who had heard of SCHAP before our interview. Attrition due to this restriction and to loss of cases with missing data for any of the variables in the model reduced out sample for this regression to 133 observations, 104 participants and 29 nonparticipants. The small proportion of nonparticipants included in the sample represents a potential threat to the generalizability of the results, but the improvement in interpretation gained from restricting the comparison population to those who could have made a choice offsets this concern.

The logistic regression results are presented in Table 9-6. We found significant differences between the participating and comparison employers in three of the five types of

Table 9-6

Propensity to Participate in SCHAP Among Employers Who Heard of SCHAP

	Mean or Proportion	Beta	Standard Error	Odds Ratio
Intercept	-	-3.01 ***	1.110	0.050
Non-profit	0.293	0.87	2.050	2.380
Years in operation	11.600	0.00	0.030	1.000
Tourist industry	0.400	0.04	0.950	1.040
Business has subsidiaries or is a subsidiary	0.072	1.03	1.210	2.810
Number of employed in Horry/Marion Counties	8.600	0.12 **	0.050	1.130
Percent of full-time employees over age 50	17.320	0.01	0.020	1.010
Percent of full-time employees less than age 30	32.590	-0.02 *	0.010	0.980
Percent of full-time employees who are single	28.060	0.01	0.010	1.010
Percent of full-time employees who are women	36.280	0.01	0.010	1.010
Family operated business	0.376	0.18	0.680	1.190
Ever offered insurance before SCHAP	0.202	-0.88 *	0.480	0.420
Worry about not offering health insurance				
A lot of worry	0.320	3.09 ***	0.840	21.960
Some worry	0.368	1.33 ***	0.500	3.770
Hardly any worry	0.037	-1.11	1.740	0.330
Self-assessed financial status				
Excellent	0.133	1.66	1.460	5.250
Good	0.479	2.63 ***	0.990	13.890
Fair	0.321	1.96	1.380	7.110
Self-assessed debt level				
No debt	0.153	-2.41 **	1.110	0.090
Little debt	0.271	-0.45	1.280	0.640
Moderate debt	0.421	-0.33	1.030	0.720
Had problems filling vacancies	0.281	-1.61 ***	0.410	0.200

Pseudo R-Square: .449198

Overall F: 11.72 ***

* $p<0.10$

** $p<0.05$

***$p<0.01$

NOTE: Omitted categories for categorical variables are For-Profit, Not in Tourist Industry, No Subsidiaries, Employer of Low Wage Workers, Never Offered Insurance, No Worry About Not Offering Insurance, Poor Financial Status, High Debt, No Problems Filling Vacancies.

SOURCE: Medicaid Expansion Demonstration Employer Survey.

factors believed to be associated with participation, notably work force characteristics, financial status, and prior health insurance experience.

Structural Characteristics of the Business. None of the structural characteristics were significant. We found no independent influence from type of ownership, years in operation (age of the firm), whether it was associated with the tourist industry, the major employer in the region, or whether it had some corporate structure (i.e., had a subsidiary or was a subsidiary to another firm).[3]

Characteristics of the Work Force. Among the five work force characteristics included in the model, we found that the probability of participating increased with the number of workers and decreased slightly with the percentage who were under age 30. We included two age variables in the model, the percentages of workers under age 30 and over age 50, to determine if having a concentration of young or old employees was related to participation. We expected that firms employing a high proportion of young workers would be less likely to join SCHAP, because young workers do not value health insurance as highly as older workers. Conversely, we expected that high concentrations of older workers would be associated with participation. We found that the proportion of workers over age 50 was unrelated to participation but the hypothesis about workers under age 30 was confirmed ($p<0.10$).

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[3] The health care industry indicator was excluded from the model because only six health care firms were in the sample. The standard industrial classifications were excluded because they added a considerable number of degrees of freedom to the model, which became a concern given the small number of observations and we have no particular hypothesis about how industrial classification should influence participation.

Family Participation in the Business. Contrary to expectations, family businesses were *not* more likely to join SCHAP than employers of low-wage workers. We had hypothesized that they would be more likely to join because they are more concerned about health insurance and we found this result in the bivariate tabulations. However, holding other factors constant, we found no difference in the propensity to join based on family participation.

Financial Status of the Business. Financial measures were included in the model because wealthier firms are more likely to be able to afford coverage. The three financial measures in the model included two direct measures--self-assessed financial status and self-assessed level of debt--and one indirect measure--problems filling vacancies.[4] All three factors were significant. Firms reporting "good" financial status were more likely to join SCHAP than firms with poor status, as predicted. However, the relationship is not monotonic over the range, as excellent financial status had a small, insignificant coefficient.

Contrary to expectations, firms reporting no debt were *less* likely to join than firms reporting high debt. This finding is consistent with the bivariate tabulations, further supporting the conclusion that self-reported debt levels may not be an adequate substitute for actual debt ratios. However, even if we had been able to obtain debt ratios, the complete absence of debt may mean something different than we had expected. Rather than indicating financial strength, it could also reflect financial weakness to the extent that credit cannot be obtained. If financial weakness rather than strength is, in fact, the status reflected by reports of no debt, then the finding would be consistent with our general hypothesis that financially weaker firms are less likely to join than stronger ones.

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[4] We had intended to include offering a pension as an explanatory variable, but it was excluded because only four respondents in both the participating and nonparticipating groups combined provided employee pensions.

Finally, firms that had trouble filling vacancies were *less* likely to join SCHAP than firms that did not have trouble. Again, the bivariate relationship remains in the multivariate model. This was the most statistically significant explanatory variable in the model ($p = 0.0001$). As noted above, we would expect to find this relationship if participating employers were reporting their current problems rather than those they had when they decided to join SCHAP, which leads us to suspect that they may have reported their current situation rather than the past one. If this is in fact the explanation, it would reflect very positively on the benefits for small employers if they provide health insurance.

Prior Health Insurance Experience. The model included two measures of prior experience and concern with insurance: whether or not the employer ever offered health benefits and how worried he or she was about not offering benefits. Both measures were significant. Employers that had a lot of worry or some worry about not offering health benefits were more likely to join SCHAP than employers who did not worry about it. The effect increased with the degree of worry, as expected.

Contrary to expectations, however, employers who had provided health benefits in the past were *less* likely to join SCHAP than those who had not offered them. We hypothesized that firms that had offered health benefits in the past, would be more likely to join SCHAP because they had already demonstrated a concern about health insurance. We have no explanation for why they would be less likely to join, although the fact that they discontinued coverage suggests either a change in circumstances or a negative experience with insurance in the past, which may be associated with a decision not to offer SCHAP coverage.

9.5 Employer Satisfaction with the SCHAP Program

Employers who participated in SCHAP were asked in the survey to assess their experience with SCHAP in three ways: satisfaction with various aspects of SCHAP's operations, whether they agreed or disagreed with specific statements about SCHAP and its impact, and plans for renewal should SCHAP continue.

Employers were almost universally satisfied with every one of the 11 aspects of SCHAP they were questioned about (Table 9-7). Although we expected employers to be satisfied based on our case study interviews, it is notable that, with one exception, a substantial majority of employers were *very* satisfied, the highest level of satisfaction they could report. For example, 89.3 percent were very satisfied with SCHAP's overall performance, 9.8 percent were satisfied, and 0.8 percent (one respondent) was very dissatisfied. Overall satisfaction was the most extremely positive of the 11 dimensions, but many of the others had almost as high a percentage of respondents who were very satisfied, especially with respect to the accuracy and usefulness of the information employers received from SCHAP staff.

The highest level of dissatisfaction related to SCHAP eligibility rules. Just over 11 percent of the SCHAP employers were unsatisfied or very unsatisfied with the eligibility rules. This finding is entirely consistent with the case study, in which we found that the strict

Table 9-7

Participants' Satisfaction With Selected Aspects of SCHAP

	Very Satisfied	Satisfied	Unsatisfied	Very Unsatisfied
Overall satisfaction with SCHAP	89.3%	9.8%	0.0%	0.8%
Usefulness of information received	79.8	20.2	0.0	0.0
Accuracy of information received	77.9	22.1	0.0	0.0
Amount of paperwork/business	72.3	27.7	0.0	0.0
Amount of paperwork/enroll employees	67.9	32.1	0.0	0.0
Time spent on plan administration	63.6	36.4	0.0	0.0
Range of services with SCHAP	63.0	34.5	2.5	0.0
Employer's individual monthly premium costs	61.3	38.7	0.0	0.0
Monthly premium cost employees pay	55.4	43.5	1.1	0.0
Employer's family monthly premium costs	53.9	44.2	1.0	1.0
Eligibility rules	36.9	51.6	9.8	1.6

SOURCE: Medicaid Expansion Demonstration Employer Survey.

eligibility criteria was the greatest impediment to enrolling interested employers. The survey results indicate that even participating employers sometimes encountered problems meeting the eligibility criteria or were unhappy that they could not cover all their workers.

Participating employers were also asked to agree or disagree with four positive and three negative statements about SCHAP. In each case, the results were consistent with a positive attitude about SCHAP; that is, the vast majority agreed with the positive statements and disagreed with the negative statements (Table 9-8). Almost all employers felt that their employees were less worried about family health because of SCHAP. A smaller percentage, although still a substantial majority, 60-70 percent, felt that SCHAP lowered employee turnover, reduced employee sick days, and improved employee job performance. Almost everyone disagreed with the three statements that SCHAP is more expensive than expected, SCHAP is more trouble than expected, and SCHAP is more trouble than it is worth.

Finally, employers were asked about the probability that they would renew participation if SCHAP continued. All participants indicated they would renew. The most common reason given (Table 9-9) was that SCHAP was the best coverage available, which was mentioned by about half the employers. The next most common reasons, mentioned by about 15-20 percent of employers, were peace of mind and the belief that health insurance coverage saves the business money.

By all three measures of satisfaction, SCHAP was enormously popular with its members. The program served their needs, they believe it had beneficial effects on their employees and their businesses, they were extremely satisfied with it, and they wanted it to

Table 9-8

Employee Attitudes About the Impact of SCHAP On Businesses and Employees

	Agree	Disagree	No Opinion
Employees less worried about family health	95.8%	1.7%	2.5%
Employees take less sick days due to SCHAP	66.4	14.3	19.3
Employees do their jobs better due to SCHAP	64.7	15.1	20.2
Employee turnover lower due to SCHAP	58.8	22.7	18.5
SCHAP is more expensive than expected	0.8	99.2	0.0
SCHAP is more trouble than expected	0.0	100.0	0.0
SCHAP is more trouble than it is worth	0.0	100.0	0.0

SOURCE: Medicaid Expansion Demonstration Employer Survey.

Table 9-9

Reasons for Renewal of SCHAP by Participants*

Reasons for Renewal	Percent saying factor is most important reason for renewal: Total	Family Business	Employer of Low Wage Workers
SCHAP is best coverage around	55.5%	61.8%	50.0%
Peace of mind	20.2	14.6	25.0
Health coverage saves business money	16.8	14.6	18.8
Employees want it	14.3	14.6	14.1
Satisfied with SCHAP so far	13.5	16.4	10.9
Improved employee morale	1.7	0.0	3.1

*113 of the 122 SCHAP participants said they would by very likely to renew and 9 said they would probably renew.

NOTE: Chi-square test of significance for difference between Family Businesses and Employers or Low Wage Workers: *p < .10, **p < .05, ***p < .01.

SOURCE: Medicaid Expansion Demonstration Employer Survey.

continue. The survey findings are very consistent with the discussions we had with employers during site visits. SCHAP staff gave excellent service to their participants.

The degree of service they were able to provide points, however, to an idiosyncracy of SCHAP that may not be feasible to replicate outside the context of the demonstration. The ratio of participating employers to SCHAP staff was very low. Counting two Blue Cross Blue Shield contractors who were placed full time in the SCHAP office and the full-time program manager in Columbia, there were seven staff members serving about 120 employers.[5] These seven persons met with participants and were available to help solve their problems. The excellent service that SCHAP participants received was at least partly due to the small number of participants the staff had to serve. It may be difficult to duplicate this staffing ratio outside of a demonstration program. Regardless of the impact of these additional resources, the SCHAP program structure and staff service model served participating employers extremely well.

9.6 Impact of SCHAP on the Private Market for Small Business Insurance

Case study interviews with a representative of the local Chamber of Commerce, which offers a franchise insurance plan to small businesses, and with two local insurance brokers indicated that they were marginally aware of SCHAP, but knew little about it. They reported that it had no effect on their business because the program was too small and eligibility too restrictive.

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[5] The 120:7 ratio is only an approximation of the client-to-staff ratio. A large part of their work included marketing to nonparticipating employers in addition to serving members. However, there were many other staff including Medicaid program staff who devoted a small portion of their time to special functions such as enrollment and claims processing.

The employer survey results support the finding that SCHAP had little, if any, impact on the private small business market. We addressed this question in terms of the reasons participants gave for their decision to join SCHAP and the reasons nonparticipants gave for not offering health benefits to their employees.

The most common reason for joining SCHAP was that the cost is low compared to other insurance plans. This was the main reason reported by half the employers in both the family business and low-wage worker categories (Table 9-10). (This is consistent with the previous finding that the most important reason for renewing SCHAP membership was that SCHAP was the best coverage available; recall Table 9-9.) One could argue that the cost rationale implies that SCHAP took business from more expensive private plans, because of its lower cost. However, based on the case study interviews, it is more likely that these employers would not have offered insurance at all without the availability of the low-cost SCHAP premiums. Only about six percent said their main reason for joining SCHAP was that they were unable to get other insurance (Table 9-10), so almost all of them could probably have purchased private plans at any time had they been willing to pay the price.

It is also interesting to see that family business owners were almost twice as likely to join for "peace of mind" (33 percent) as employers of unrelated low-wage workers (17 percent). Peace of mind implies an underlying desire to obtain coverage for employees and it is clear that this desire is greater when the business employs a significant number of the owner's family members. It is this segment of the population that would be most likely to

Table 9-10

Main Reasons for Joining SCHAP, by Type of Business

Main Reason For Joining SCHAP	Total	Family Business	Employer of Low Wage Workers
Less expensive than other insurance	52.1%	52.7%	51.6%
Peace of mind	24.4	32.7	17.2
Owner/employee need medical care	9.2	5.5	12.5
Employees wanted it	7.6	3.6	10.9
Couldn't get other insurance	5.9	3.6	7.8
Covered services owner/ employee wanted	0.8	1.8	0.0

NOTE: Chi-square test of significance for difference between Family Businesses and Employers or Low Wage Workers: *p < .10, **p < .05, ***p < .01.

SOURCE: Medicaid Expansion Demonstration Employer Survey.

purchase a private health plan if SCHAP were not available and it is this segment that would most quickly become ineligible for SCHAP as the business prospers, because, in contrast to businesses that employ unrelated low-wage workers, a high percentage of the eligible workers share in the profits. Thus, although SCHAP does not draw firms away from private insurers, it probably does not generate future business for them, because the SCHAP employers most likely to purchase private insurance when they become ineligible for SCHAP are also those who would buy private plans if they could afford them.

Among nonparticipating firms, 46 percent were unsatisfied or very unsatisfied not offering insurance, which suggests that there is significant unmet demand, all else equal (Table 9-11). This demand for insurance comes more from the family businesses than the employers of low-wage workers. Only about one-third of employers of low wage workers were unsatisfied compared to three-fourths of family business owners. Clearly, the demand for health insurance in the small business market was heavily driven by the firms who, we hypothesize, are composed of traditionally middle-income owners and their families with previous health insurance experience.

So then, why do non-participating employers not offer insurance if many are dissatisfied with not offering coverage? Among all nonparticipants, 61 percent were not looking for or considering health insurance (Table 9-11). To investigate whether they were not interested in insurance or had given up a fruitless search, we asked *why* they were not considering insurance. Among those who were not considering health insurance, 12 percent could not find a plan that fits their needs, which implies that they had given up the search following previous unsuccessful efforts. Another 66 percent said they could not afford it,

Table 9-11

Attitudes of Non-Participating Employers Toward Health Benefits

	Total	Family Business	Employer of Low Wage Workers
Satisfaction With Not Offering Insurance			
Very Satisfied	8.9%	0.0%	13.2%
Satisfied	45.3	24.2	55.6
Unsatisfied	31.7	43.0	26.3
Very Unsatisfied	14.1	32.9	5.0
How Actively Are You Looking For Insurance			
Actively Looking	20.6	27.6	16.5
Thinking About It	18.7	19.0	18.6
Not Looking	61.3	53.5	65.0
Reasons For Considering Offering Insurance			
Improve Morale	84.8	79.6	88.0
Pressure From Employees	15.2	20.4	12.0
Pressure From Clients	0.0	0.0	0.0
Reasons For Not Considering Offering Insurance* **			
Have Not Found Plan That Fits	11.6	18.6	9.1
Not Employer's Responsibility To Off	22.1	11.7	25.8
Cannot Afford Insurance	66.3	69.7	65.1

NOTE: Chi-square test of significance for difference between Participants and Non-Participants:
*p < .10, **p < .05, ***p < .01.

SOURCE: Medicaid Expansion Demonstration Employer Survey.

which also implies that they would like to have it. About 22 percent believed that it is not the employer's responsibility to provide insurance, which implies that they would not offer insurance even if it were affordable. Thus, although more than half the nonparticipants were satisfied not offering health benefits, only about 14 percent (22 percent of the 62 percent who were not considering insurance) had no interest at all. These findings suggest that health insurance is not a major issue for employers who do not offer it; the vast majority would offer it if the circumstances were right, but most are also satisfied that they do not.

9.7 Lessons Learned

In this analysis, we have addressed four research questions about the relationship between SCHAP and small businesses in Horry and Marion Counties. First, the effectiveness of marketing efforts was mixed. SCHAP staff relied heavily on news coverage, especially by newspapers, early in the project and became increasingly active as it became apparent that early enrollment targets were not going to be met. Ultimately, they contacted the vast majority of potentially eligible firms in the area by direct mail to firms on a list purchased from Dun & Bradstreet. Because our sampling frame for the comparison group survey was purchased from the same source using similar selection criteria, it is significant that only 40 percent recalled having heard of SCHAP. Clearly many more were contacted by direct mail but did not recall receiving the information, probably because they were not interested. Direct mail typically produces very low response rates, so the fact that 40 percent recalled hearing of SCHAP is encouraging. Nevertheless, based on the distribution of SCHAP contacts over time and the fact that most firms did not recall receiving the SCHAP mailing, it appears that the employers who were interested in SCHAP learned about it early in the program. Later marketing efforts were less successful, because the interested employers had already been reached. There appear to be diminishing returns from marketing, as one would expect.

The most significant factors contributing to slow enrollment in SCHAP were lack of interest by a substantial portion of the small business population and SCHAP's very strict eligibility criteria, which excluded the majority of firms that expressed an interest. The eligibility criterion that seemed to be most frustrating for employers was the absence of any coverage for higher-paid, more senior employees who did not meet the income threshold. SCHAP's planners had anticipated this problem and included a privately-funded insurance pool for such workers in the original concept. However, it was abandoned at the start of the program because HCFA required the State to establish a separate risk pool for those who were not eligible for the demonstration. The State declined to set up a separate pool because they were concerned about adverse selection, and did not want to incur the cost of administering a parallel system.

The most significant factors influencing participation were number of employees, financial status, and prior worry about not providing insurance for workers. The probability of participation increased with the number of employees, self-assessed financial health, and the extent of worry about insurance. Problems filling vacancies were negatively related to participation. However, if participants reported about their current situation rather than their situation when they joined SCHAP, then this finding would indicate a valuable benefit of providing health benefits. This is purely supposition, but it explains the observed relationship and suggests that future research should attempt to identify problems filling vacancies both at the time of enrollment and the time of the survey to investigate this hypothesis.

SCHAP participants were universally pleased with their experiences with SCHAP. They all intended to continue participation if SCHAP had continued and they were very upset that it ended. Although we have no follow-up data on the disposition of participants, SCHAP staff reported that most were left uninsured when SCHAP ended. The levels of satisfaction reported by participants were extremely high on all dimensions of SCHAP performance. The only measurable dissatisfaction concerned eligibility criteria, which reflects difficulties meeting the standards and employers' inability to cover all their employees. While the low employer-to-staff ratio undoubtedly contributed to the excellent service participants reported, SCHAP is a publicly funded intervention to compensate for failure in the small group market, which would justify higher administrative costs than one would expect to see in a well-functioning market.

Finally, there was no evidence that SCHAP had interfered with the private market for small group health insurance. A substantial portion of small employers in Horry and Marion Counties had no interest in SCHAP. The propensity to join increased with the financial health of the company and inability to afford insurance was the most common reason given by nonparticipants for not offering insurance. Perhaps the strongest evidence that SCHAP had no discernable impact on the private market was the fact that local insurance brokers who specialize in small group sales were barely aware of SCHAP's presence in the market and believed that it would not have an impact because its eligibility criteria were so restrictive.

10

Implications of the Medicaid Expansion Demonstration

This chapter summarizes and synthesizes the results of the evaluation of the Medicaid Expansion Demonstration. The demonstration funded three programs:

- The Maine Health Program (MHP), a statewide non-categorical, poverty-level Medicaid expansion for adults in Maine.
- The South Carolina Health Access Plan (SCHAP), an employer-based program for low-income workers and their dependents in Horry and Marion Counties, South Carolina; and
- Health Access Spokane (HAS), a program for low-income individuals and families in Spokane County, Washington.

We focus on implications of the Medicaid Expansion Demonstration with respect to program administration, enrollment impacts, utilization and costs, access and satisfaction, and employer participation.

We begin with an overview of the key accomplishments of the demonstration, followed by a discussion of the phase-down experience, and conclude with a summary of "lessons learned."

10.1 Key Accomplishments of the Medicaid Expansion Demonstration

Before proceeding with lessons learned from the demonstration, we would like to highlight three key accomplishments of the Medicaid Expansion Demonstration. First, the

Medicaid Expansion Demonstration enrolled 13,610 people across the three sites. Most of the participants were uninsured at the time they joined the demonstration (or they were shifted from State-funded programs for the uninsured).

Second, there can be no question that access to care was improved by the demonstration. However, measurement of access "impacts" is complex in a non-experimental design (i.e., in the absence of randomization). Unfortunately, our study could not model the impact of *obtaining* insurance coverage, due to lack of a baseline non-enrolled population that could be followed after the demonstration was implemented. Instead, we conducted longitudinal analyses showing the impact of the *loss* of insurance coverage on access and satisfaction. The likelihood of obtaining ambulatory care, especially in a non-hospital-based setting, declined after coverage was terminated. For example, upon disenrollment from SCHAP, the likelihood of a visit in the past three months declined from 60 percent to 39 percent. Concurrently, the likelihood of experiencing unmet need substantially increased (from 18 percent to 32 percent). Satisfaction with the cost of medical care dropped precipitously, following termination of coverage. Whereas 51 percent were very satisfied with medical care costs during SCHAP, only 10 percent were very satisfied after SCHAP. Similar impacts were observed in Maine, after the demonstration ended. Thus, we conclude that the demonstration improved access to care by eliminating financial barriers to care.

The third key accomplishment of the Medicaid Expansion Demonstration was the involvement of employers in the South Carolina program. SCHAP successfully enrolled eligible employees and dependents of eligible employers and provided a scaled-back package of Medicaid benefits. The program was extremely well received by employers.

10.2 Lessons Learned from the Medicaid Expansion Demonstration

Lesson 1: Administrative Complexity Should Not Be Underestimated

The three demonstration programs were more complex to administer than might have been anticipated. The three programs utilized different approaches, including piggybacking on the traditional Medicaid program in Maine, coordinating between two existing agencies in Washington, and establishing an entirely new field operation in South Carolina.

MHP built upon the existing Medicaid infrastructure and was viewed simply as another category of Medicaid eligibility. One might have expected a smooth implementation and operation as a result. However, the State encountered legislative resistance which placed the future of MHP in jeopardy, year after year, and hence distracted program staff from developing any innovations within the program. For example, Maine had planned to implement a primary care case management (PCCM) program as part of MHP to control utilization and minimize program costs. A pilot PCCM program was implemented for both Medicaid and MHP beneficiaries in two counties only a few months before MHP was terminated.

South Carolina devoted considerable resources to administering the SCHAP program, for example, through an extensive on-site effort of employer recruitment, individual enrollment, and program monitoring. Administrative expenses averaged 40 percent of total program costs, with a low of 26 percent in the final year of the program. This amounted to $58 per member per month in administrative expense. Clearly, a hallmark of the program was the level of "customer service" provided to both employers and employees. However, it would appear there were some "inefficiencies" introduced in administering the program on

such a small scale in two counties, and no opportunities to reap any economies by applying the knowledge or infrastructure from the demonstration to a larger geographic area.

From HAS, we observed the conflicts that can occur when a program is co-administered by two state agencies with different organizational styles, philosophies, motivations, and priorities. The Medicaid agency, which conceived of HAS, maintained a client advocacy orientation, while the Health Care Authority (HCA), which was charged with day-to-day operation of HAS, had a private insurance perspective. Initially, more attention was given to "learning to speak the same language" and resolving differences in the "cultures" of the administering agencies than to developing the infrastructure for eligibility determination, marketing, and education. None of the enrollment systems were automated at the time HAS was implemented. Additionally, the concept of targeted marketing was anathema to HCA staff. HCA staff also faced conflicting priorities. At the time HAS was being implemented, a state-subsidized health insurance program for low-income people, known as the Basic Health Plan (BHP), was being converted from a pilot phase to a permanent program. This meant that HCA was undergoing reorganization and expansion at the same time it was "burdened" with the additional responsibility of overseeing operations of HAS. This largely explains the low levels of enrollment of previously uninsured individuals in HAS.

On a more positive note, HAS served as a "learning experience" for other joint State initiatives between Medicaid and HCA. The introduction of BHP-Plus, a Medicaid extension for low-income children, was coordinated by HCA in July 1994. According to State Medicaid officials, this effort went much more smoothly as a result of experience gained

under the HAS demonstration.

Lesson 2: Enrollment Targets were not Easily Achieved

None of the three programs easily achieved their enrollment targets. The Maine Health Program (MHP) had originally set a target of 4,000 new enrollees (including approximately 2,000 rollovers from the State-funded MHP). Open enrollment yielded only 800 new eligibles; the remainder was identified through a review of Medicaid denials. SCHAP projected an average monthly enrollment of 1,300 members, with a first-year maximum of 1,390 at any one time; SCHAP staff expected the program to become fully subscribed very quickly. Clearly, this did not happen. Membership peaked at 1,211 in October 1995 – about 30 months into the program. Finally, HAS set a goal of 4,200 members, but after the first year, only 35 percent of this goal had been reached.

These demonstrations did not meet their enrollment targets for a number of reasons. SCHAP had narrow eligibility criteria which few employers could meet. Additionally, some employers were unwilling to offer a program to their low-income employees that provided a more generous benefit than was available to higher-income workers. The salient message of SCHAP is that income-based eligibility is not attractive to employers; instead, health insurance programs need to insure the entire group, perhaps with varying levels of subsidies based on income.

The reasons for low participation in Maine and Washington stem from the lack of marketing as well as volatility in the two programs. Neither Maine nor Washington committed significant resources to marketing the programs. A large share of the initial

enrollees were shifted from State-funded programs (the Maine Health Program and the Basic Health Plan) into the demonstration. Otherwise, word of mouth was the dominant mode of information about the program. Little formal outreach and marketing of the program was conducted. In Washington, program administrators were concerned that too much marketing would result in waiting lists, and did not want to turn people away. Interestingly, the plans were willing to finance State marketing efforts for HAS, but the State declined the offer.

Other factors accounting for low enrollment in Washington included a lack of local presence in the demonstration county (which was 260 miles away from the State Capitol); a lack of unified State support for the program; inadequate data systems for identifying and enrolling those who were eligible for HAS; and possible welfare stigma associated with HAS. Premature cancellation of the program was announced approximately 15 months after the program began because the State was unwilling to commit additional resources to conduct a large-scale marketing campaign. Ironically, enrollment climbed steadily after the media blitz denouncing the premature termination of the program. The HAS demonstration period also was marked by the "rise and fall" of health care reform in Washington State, which also served to divert attention away from the demonstration.

In Maine, program volatility also affected the program's enrollment history. The open enrollment took place at the same time the Governor was proposing to eliminate the program. Little advance notice was provided of the open enrollment period (less than 10 days). As a result, only 800 new enrollees came from the open enrollment. Instead, most of the new enrollees (about 3,000) were identified through a review of Medicaid denials for MHP eligibility. No new enrollments were admitted after December 1993 until the program ended

in March 1995.

The experience of the Medicaid Expansion Demonstration demonstrates that simply offering a program to low-income, uninsured individuals, families, or employees does not ensure they will know about the program or choose to participate. Moreover, program volatility negatively affects States' willingness to market the program and individuals' willingness to join the program.

Lesson 3: Program Orientation Affected Enrollment and the Resulting Risk Pool

Two of the programs – SCHAP and HAS – pursued innovative efforts to privatize or decentralize Medicaid-like coverage, by positioning the coverage as "insurance" rather than simply "claims payment." Both programs deliberately avoided a direct association with Medicaid. In contrast, MHP was a direct extension of the Medicaid program. The three programs provide an interesting contrast in the reasons enrollees cited for joining, which also mirror the programs' orientation.

We found that enrollees in Maine were far more likely to join MHP because of a "current medical condition," reflecting the role of the Maine medical community (especially hospitals) in referring their patients to the program. The program was developed and implemented as if MHP were another category of Medicaid, and like Medicaid, enrollees perceived MHP as a way to pay medical bills when they were sick. The program was not marketed as an insurance product, and enrollees did not seem to understand that they could not re-enroll at will. Consequently many enrollees declined to complete the six-month recertification when not actively receiving treatment and lost eligibility.

SCHAP enrollees, on the other hand, were most likely to join the demonstration to protect against a "possible future accident or illness," reflecting the insurance orientation of the program. SCHAP was deliberately "de-linked" from Medicaid and marketed as an employer-based insurance product. As an employment-based program, SCHAP enrollees were in better health than those enrolled in the other two programs.

HAS, too, was disassociated from Medicaid, and was positioned as a private insurance product like the Basic Health Plan. As a result, enrollees tended to report they joined HAS to protect against future health care needs, as well to afford routine checkups, consistent with the managed care orientation of the program. (Moreover, when compared with traditional medical population, SCHAP enrollees were lower cost.)

We have observed, therefore, that each program's orientation and implementation directly affects the risk profile. MHP's association with Medicaid tended to attract a sicker risk profile. However, from an insurance perspective, these risks may not be insurable if individuals enroll when they need care, and disenroll when they no longer need care (Wintringham and Bice, 1985). On the other hand, employment-based coverage, like SCHAP, "self-selects" those who are working and typically are healthier than those who are not working. It would appear that individual coverage through a publicly-subsidized insurance program, such as HAS, attracts a broader mix of enrollees – poor and nonpoor, employed and unemployed, and healthy and sick.

Lesson 4: Private Insurance "Crowd-Out" Was Not a Problem

A concern with any Medicaid expansion is whether individuals will drop their private

insurance coverage in favor of publicly-funded or subsidized coverage (Cutler and Gruber, 1995; Dubay and Kenney, 1997). Across the three programs, no more than 15 percent of those surveyed reported having private coverage prior to joining the demonstration. Many of these were likely to have been underinsured.

The highest level of private coverage was found in Maine (13.6 percent), where health status was poorest, suggesting that MHP enrollees may have dropped their private coverage to obtain richer benefits as well as to eliminate cost-sharing.

In South Carolina, where 10 percent reported private coverage prior to joining SCHAP, the employer could not have offered health insurance within the last 12 months. Those who reported prior coverage could have obtained it through a spouse or from a previous job. Interestingly, few insurance brokers in the two counties even knew SCHAP existed.

HAS enrollees had the lowest level of prior private coverage (7.1 percent). One possible explanation is that the level of marketing and outreach was so limited that most people with private coverage would not have known about HAS. Indeed, the demonstration attracted predominantly those who were uninsured or who were insured through a state-subsidized program. Most individuals enrolled in the demonstration reported that they could not afford health insurance coverage (71 percent in Maine and 46 percent in Washington) when they were employed. Very few individuals reported that they did not *want* health coverage.

The analysis, therefore, does not provide evidence that private insurance was "crowded out" by expansion of Medicaid Eligibility under the demonstration.

Lesson 5: Variations in Program Structure Were Associated with Variations in Access and Satisfaction

Our analysis has shown that the structure of the service delivery system can affect levels of access and satisfaction. The capitated managed care system under HAS performed relatively more favorably than the other two programs. Of particular note were the lower levels of hospital-based ambulatory care and higher levels of office-based care in Washington, relative to the other two programs. For example, 66 percent of HAS enrollees but only 48 percent of MHP enrollees had an ambulatory visit in a three-month period. This is likely a function of the availability of a "medical home" in HAS. Unmet need was significantly lower in Washington than in the other two states. Satisfaction also tended to be higher in the capitated system in Washington than in the two fee-for-service programs. In particular, satisfaction with the cost of care was highest in Washington (78 percent were very satisfied), intermediate in South Carolina (61 percent), and lowest in Maine (45 percent).

A general insight of the Medicaid Expansion Demonstration is that managed care is acceptable to low-income populations. The results reveal a fundamental irony of Medicaid managed care. Contrast, for example, the features of the HAS and MHP programs. HAS restricted access to a network of providers established by the two managed care plans. In theory, MHP offered unrestricted access to providers under a fee-for-service delivery system. In reality, however, the appearance of freedom-of-choice was just an appearance, given the unwillingness of many providers to participate in Maine's Medicaid program. Differences in the level of satisfaction with regard to provider choice seem to reflect an anomaly of Medicaid managed care – restricting freedom-of-choice through a private managed care provider

network can actually expand access for Medicaid beneficiaries. Anecdotal evidence obtained during the case study suggests that provider capacity under HAS exceeded that under traditional medicaid fee-for-service. Some providers opted to participate through the managed care program although they closed their practices to Medicaid fee-for-service patients. Moreover, perceived quality of care is higher.

Lesson 6: Aggressive Program Management Can Result in Under-Utilization

We surmise that the aggressive management of utilization and costs by SCHAP staff contributed to lower levels of utilization relative to enrollees in the other two states, and consequently, higher levels of unmet need reported by SCHAP enrollees. Anecdotal evidence from the case study suggests that SCHAP staff monitored and followed up on every hospitalization and emergency room visit. Additionally, according to the SCHAP Final Report, members were advised during orientation that "if they abused the program or did not follow the guidelines for obtaining treatment, they could endanger the economic stability of the program or face paying the total bill themselves." Conversely, SCHAP staff apparently portrayed the message that low expenditures could result in expansion of the program. We speculate that such messages, although well-intentioned, may have encouraged subscribers to not seek care or to delay seeking care due to concerns about losing their own coverage, or threatening others' coverage. However, this was never confirmed in the case study interviews.

Interestingly, we observed that levels of unmet need declined over time among continuous SCHAP enrollees. These findings are consistent, too, with the utilization and cost

results, which showed an upward trend over the three years. This suggests that SCHAP staff were less vigilant in their management of utilization and costs as the SCHAP program became more established and the future of the demonstration was in less jeopardy. (Moreover, SCHAP enrolees' recall of the orientation message likely diminished over time.) Our conclusion, therefore, is that under-utilization can occur if care is "over-managed."

Lesson 7: Concerns About Pent-up Demand were Unfounded

We examined the relationship between length of enrollment and patterns of utilization and cost to determine whether there was any evidence of pent-up demand. Some have found a "start-up effect," whereby those who were uninsured had higher levels of use when they first obtained insurance coverage, due to previous unmet needs (Wintringham and Bice, 1985). However, as might be expected, recent evidence suggests that pent-up demand is most profound among those without insurance for at least one year (Martin *et al.*, 1997).

In general, we did not find evidence of pent-up demand in our analyses. Utilization was reasonably consistent over time or tapered off gradually as length of enrollment increased. Except in one instance, we did not find unusually high levels of utilization or costs during the initial months of enrollment. The one exception was in Maine, where hospital use was highest in the first month of the program and then steadily declined. However, this is unlikely to reflect true pent-up demand, but rather, is more likely an artifact of the enrollment process. Anecdotal evidence suggests that hospitals were enrolling patients already admitted in order to get their bills paid. Our results are certainly consistent with that scenario. It seems improbable that hospital admissions could have been scheduled on such short notice.

Our analysis should be comforting to managed care plans that are considering coverage of low-income, previously uninsured populations. From a rate-setting perspective, the results imply that utilization is not extraordinarily high in the first few months of enrollment. Our analysis has not addressed the *administrative costs* associated with turnover in programs for low-income populations. The average length of enrollment was 13 to 14 months across the three demonstration programs, although substantial proportions were enrolled for six months or less (24 percent in MHP, 34 percent in SCHAP, and 33 percent in HAS). Our results suggest that enrollment turnover may have less of an adverse effect on health care costs than on administrative costs.

Lesson 8: Elimination of Cost-Sharing Stimulated Higher Levels of Utilization

Although we found no evidence of pent-up demand, we did find that utilization patterns varied depending on the benefit structure. We compared probabilities and levels of use between two programs in Washington State, the Health Access Spokane demonstration and the Basic Health Plan (BHP). BHP was a publicly-subsidized insurance program for low-income individuals and families, which required a monthly premium and copayments at point-of-service, and had a 12-month pre-existing condition clause. The maximum premium payment for BHP was $600 per year for individuals and $1,200 for families at the time HAS began. Additionally, the BHP copayments were not inconsequential for a low-income population: $8 to $10 per doctor visit (excluding preventive care), $25 to $50 per emergency room visit, and up to $100 per hospital stay. HAS, on the other hand, had no premiums, no copayments, and no limits on use for pre-existing conditions.

As would be expected, HAS members had a significantly higher probability of ambulatory care use than BHP members (also low-income and living in Spokane County), in the range of 50 percent higher. Similarly, the probability of hospitalization was 46 percent higher. It is unlikely, however, that this entire differential is due to variations in the benefit structure. Unobserved differences in health status between HAS and BHP members likely account for some (but an unknown) magnitude of the utilization differential. For example, we found that 14 percent of HAS enrollees were in fair or poor health, compared to 9 percent of BHP enrollees in 1989 (Diehr *et al.*, 1993) Assuming the sicker BHP enrollees opted to enroll in HAS, the actual differential may be even greater.

The lack of cost-sharing in HAS was a source of consternation within HCA (the agency responsible for day-to-day operations of HAS). They felt that HAS should institute a copayment, to instill responsibility among members in making prudent decisions about health care utilization. The absence of "demand-side" cost-sharing, they argued, resulted in overutilization.

It would also appear from the utilization analyses that utilization levels differed between the two managed care organizations which served both HAS and BHP members. Enrollees in Group Health Northwest (GHNW), which was predominantly a group-model HMO, had significantly lower levels of use than those covered by Medical Services Corporation (MSC), an IPA-model. One implication is that the salaried payment arrangement among GHNW providers resulted in more effective utilization controls than the discounted fee-for-service arrangement in MSC. Thus, "supply-side" financial incentives appear to have been significant determinants of utilization as well.

Additional research is needed to model the impact of cost-sharing on utilization behavior, specifically within a low-income population. More sophisticated risk adjustment is required to control for potential selection effects of sicker people into high-option plans

Lesson 9: The Administrative Costs of Coordinating Employer-Based and Other Coverage are High

All three programs initially had some provision for employer participation, as mandated in OBRA-90. The experience in Maine and Washington has demonstrated the complexities of developing an employer-based subsidy program (or Medicaid "buy-in").

In Maine, for example, the State screened MHP applicants for the availability of private coverage. The State paid the premium for private coverage if it was found to be "cost-effective" relative to enrolling the beneficiary in MHP. The State offered wraparound coverage for benefits covered under MHP but not offered through employer-based plans. Originally, by statute, MHP was required to pay the employer or insurer for the employee's premium share. However, most employers were unwilling to participate on this basis because of the administrative difficulty of processing premium payments on other than a payroll deduction basis. Subsequent legislation authorized MHP to reimburse enrollees directly for the premium share. Only about 2.5 percent of MHP enrollees participated through employer-based plans, mostly with direct reimbursement to employees. Thus, most employers had little or no direct involvement with MHP. This is consistent with a recent study of three states, which found small enrollments and minimal cost-savings in their Health Insurance Premium Payment (HIPP) programs (, 1997).

An opposite approach was planned in Washington, whereby the State intended to ask

the employer of eligible HAS beneficiaries who were employed to contribute to the premium HAS paid to the two participating HMOs. Thus, the State hoped to find private employers who would subsidize HAS. The employer subsidy was never implemented because of program staff concerns about the temporary duration of HAS and the potential conflict that could be created if the employer paid for some workers but not others. Moreover, the HMOs were concerned about the potential impact on their small group and individual products. Thus, the State abandoned all plans for an employer component under HAS.

The South Carolina demonstration, in contrast, was entirely based on employer participation. Although the program was considered a broad success, the demonstration carried a steep administrative cost associated with employer recruitment and customer service. Administrative costs amounted to 40 percent of total program costs. While we would not expect such high administrative costs were the program to be administered on a statewide basis following the demonstration, the SCHAP experience nevertheless demonstrates the costliness of intensive employer outreach, eligibility determination, and program monitoring.

A key concern about coordinating employer-based and other coverage is the broader generosity of traditional Medicaid benefits. In the case of MHP, the State paid for services not covered under the private benefit package, thus increasing the administrative complexity of the subsidy program. In the future, it may be neither administratively reasonable, nor fiscally prudent, for a State to augment private coverage with more generous Medicaid benefits.

Lesson 10: Employers Were Willing to Participate in a Medicaid Expansion Program

The underpinning of the South Carolina demonstration was the provision of employer-based health insurance coverage to small businesses with a preponderance of low-income workers. The program seems to have attracted a disproportionate share of family businesses, which joined for "peace of mind."

Employers who participated in SCHAP were very positive about their experience. They were strongly committed to the success of the program and wanted very much to see it continue indefinitely. They were very satisfied with the benefits, costs, and administrative aspects of SCHAP. The level of satisfaction is not surprising because of the way in which SCHAP was designed. Its premiums were much less expensive than competing premiums because they were heavily subsidized by the Federal grant. They received the Medicaid benefit package, which is quite comprehensive compared to benefits typically offered in the small group market (which are often quite limited to keep the premium low).

The level of administrative service provided by SCHAP staff was exceptional; the ratio of firms to SCHAP staff was quite low. It would be a challenge to provide the same high level of service in a program that was large enough to lower average fixed costs sufficiently to compete in the private market. However, SCHAP was designed as a public program to serve a population that is not served well by the private market, so that high administrative costs relative to commercial plans which screen their risks may be justifiable.

There was one source of dissatisfaction with SCHAP – the narrow eligibility criteria for employers and their employees. SCHAP demonstrated the inequity of covering low-income employees within a business, but not covering a firm's higher-income employees.

This made the program less attractive to employers who were unwilling to offer a more generous benefit to their low-wage workers. Provision must be made for covering workers who do not meet the stringent low-income threshold required for subsidized coverage. Based on the SCHAP experience, less restrictive eligibility criteria would be expected to increase participation, decrease administrative overhead, and improve acceptance among the general population of employers. One caveat, however, is that subsidy programs are costly and typically generate relatively low enrollments, especially if they are of a temporary duration (USGAO, 1992).

10.3 Phase-Down of the Demonstration

The Medicaid Expansion Demonstration has ended and the effects seem to have been short-lived. In South Carolina and Maine, most of the demonstration participants returned to being uninsured. Most of the enrollees in the Washington demonstration transferred to the Basic Health Plan, which was already in place at the time HAS began.

MHP was terminated prematurely in March 1995, due to a lack of political will to continue the program. Two-thirds of the MHP enrollees became uninsured, and another 11 percent obtained Medicaid coverage. About 20 percent obtained private insurance coverage following disenrollment from MHP. MHP, therefore, provided short-term coverage for the uninsured; long-term solutions are still required.

SCHAP was extended one year beyond the original demonstration through additional Federal waivers, but ultimately ended in January of 1997. Although the local Health Access Board and employers had attempted to develop a small business purchasing pool to take the

place of SCHAP, that never came to pass. The Institute on Poverty and Deprivation, which had provided administrative support to the Health Access Board, discontinued operations in mid-1996 due to lack of funding. Additionally, the Health Access Board experienced discontinuities in leadership in late-1996 and it too disbanded. The business community in Horry and Marion counties was unable to form an association to purchase health insurance, although they were only 50 employees short of the minimum purchasing pool size of 1,000 employees.

When HAS ended in March 1996, most members joined the Basic Health Plan (BHP), a state-subsidized health insurance program, which pre-dated HAS. The State estimates 93 percent of HAS participants transferred to BHP. It would appear that most participants from the HAS demonstration made a successful transition to another form of insurance coverage. It is unknown, however, how long HAS members will remain enrolled in BHP. HAS had no premiums or copayments, while BHP has both; BHP premiums range from $10 to $30 per month. Apparently, HAS members who did not select a BHP managed care plan were randomly assigned to the more expensive plans.

The experience of the Medicaid Expansion Demonstration suggests that it is difficult to sustain experimental programs due to budgetary and political constraints. With the exception of Washington State, which already had the Basic Health Plan in place at the time HAS began, neither of the other two programs has led to lasting reform.

10.4 Concluding Remarks

The Medicaid Expansion Demonstration has taught us valuable lessons about the promises and challenges of creating health insurance programs for low-income people who are uninsured. This evaluation is extremely timely in light of the recent and ongoing decline in private insurance coverage (USGAO, 1997).

Perhaps the most significant lesson of the Medicaid Expansion Demonstration is that the achievement of enrollment targets is not guaranteed, even if the program is free and eligibility criteria are generous. Marketing and outreach are required, and this can be an expensive and labor-intensive effort, as SCHAP has demonstrated. When multiple stakeholders are involved, as was the case with HAS, differences in the "cultures" of administering agencies can limit the commitment to marketing, and hence, the very viability of the program. Similarly, Maine's fiscal uncertainty served to dampen enthusiasm for the program and minimized the success of open enrollment.

Nevertheless, the results clearly have shown that demonstration enrollees were better off when they were enrolled in the program than after they lost coverage, due to disenrollment (as evidenced in South Carolina) or because the program ended (as we saw in Maine). We conclude that the Medicaid Expansion Demonstration served to eliminate financial barriers to care, and thereby reduced levels of unmet need. This was achieved largely by improving access to ambulatory care, especially in non-hospital-based settings.

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Appendix A

Appendix Table 5-1
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Number of Physician Office Visits	Number of Outpatient Visits	Number of Emergency Room Visits
Intercept	-0.109329 *** (0.02524)	-0.141033 *** (0.01841)	0.205379 *** (0.01137)
Federal Waiver Status	-0.088753 *** (0.00965)	-0.060558 *** (0.00703)	-0.00864 ** (0.00434)
Open Enrollment	-0.015638 * (0.00835)	-0.008841 (0.00609)	-0.002654 (0.00376)
Enrollment through Review of Medicaid Denials	-0.026543 *** (0.00782)	-0.02539 *** (0.00571)	-0.005781 (0.00352)
Hospital Payments Reduced by Half	-0.0283 *** (0.00838)	-0.024199 *** (0.00611)	0.010416 *** (0.00377)
Hospital Payments Eliminated	-0.157689 *** (0.01258)	-0.095076 *** (0.00917)	0.006457 (0.00566)
Months Continuously Eligible	-0.000536 ** (0.00021)	-0.000818 *** (0.00015)	-0.00007 (0.00010)
Reciprocal of Months Continuously Eligible	-0.15413 *** (0.01279)	-0.072122 *** (0.00933)	-0.016959 *** (0.00576)
Multiple Enrollment Segments	0.017326 *** (0.00422)	-0.005098 * (0.00308)	0.007051 *** (0.00190)
Female	0.123347 *** (0.00405)	0.075597 *** (0.00295)	-0.001645 (0.00182)
Age	0.007618 *** (0.00115)	0.005695 *** (0.00084)	-0.005008 *** (0.00052)
Age-Squared	-0.00006 *** (0.00001)	-0.00005 *** (0.00001)	0.00004 *** (0.00001)
Physician to Population Ratio	0.34371 *** (0.02480)	0.33317 *** (0.01809)	0.130584 *** (0.01117)
Elapsed Time	0.006711 *** (0.00062)	0.005137 *** (0.00045)	-0.000317 (0.00028)
R-Squared	**0.0154**	**0.0118**	**0.0065**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Number of Primary Care Physician Visits	Number of Specialty Care Visits	Number of Hospital Admissions
Intercept	0.017416	-0.102192 ***	-0.001924
	(0.01539)	(0.01655)	(0.00322)
Federal Waiver Status	-0.035521 ***	-0.03759 ***	-0.000852
	(0.00588)	(0.00632)	(0.00123)
Open Enrollment	-0.003216	-0.015026 ***	-0.003266 ***
	(0.00509)	(0.00548)	(0.00107)
Enrollment through Review of Medicaid Denials	-0.015254 ***	-0.011766 **	-0.000691
	(0.00477)	(0.00513)	(0.00100)
Hospital Payments Reduced by Half	-0.011542 **	-0.016748 ***	-0.000884
	(0.00511)	(0.00549)	(0.00107)
Hospital Payments Eliminated	-0.058218 ***	-0.073484 ***	-0.005243 ***
	(0.00767)	(0.00824)	(0.00161)
Months Continuously Eligible	-0.000338 ***	-0.000117	-0.00006 **
	(0.00013)	(0.00014)	(0.00003)
Reciprocal of Months Continuously Eligible	-0.0706 ***	-0.065323 ***	0.009263 ***
	(0.00779)	(0.00838)	(0.00163)
Multiple Enrollment Segments	0.013869 ***	0.008694 ***	-0.000504
	(0.00257)	(0.00276)	(0.00054)
Female	0.055759 ***	0.043588 ***	-0.001164 **
	(0.00247)	(0.00266)	(0.00052)
Age	-0.00031	0.005707 ***	8.0773E-05
	(0.00070)	(0.00076)	(0.00015)
Age-Squared	0.00002 ***	-0.00006 ***	0.00000
	(0.00001)	(0.00001)	(0.00000)
Physician to Population Ratio	0.035444 **	0.241458 ***	0.025267 ***
	(0.01512)	(0.01625)	(0.00317)
Elapsed Time	0.002775 ***	0.003285 ***	0.000169 **
	(0.00038)	(0.00040)	(0.00008)
R-Squared	**0.0090**	**0.0067**	**0.0018**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Total Costs	Log of Inpatient Costs	Log of Inpatient Facility Costs
Intercept	0.321546 ***	0.026229	0.024678
	(0.07496)	(0.02610)	(0.02257)
Federal Waiver Status	-0.21374 ***	-0.001137	0.011105
	(0.02864)	(0.00997)	(0.00862)
Open Enrollment	-0.018897	-0.026161 ***	-0.019308 ***
	(0.02481)	(0.00864)	(0.00747)
Enrollment through Review of Medicaid Denials	-0.120736 ***	-0.005847	-0.003874
	(0.02323)	(0.00809)	(0.00699)
Hospital Payments Reduced by Half	-0.093647 ***	-0.002032	0.002905
	(0.02488)	(0.00866)	(0.00749)
Hospital Payments Eliminated	-0.688401 ***	-0.051517 ***	-0.056408 ***
	(0.03735)	(0.01301)	(0.01124)
Months Continuously Eligible	-0.003385 ***	-0.000696 ***	-0.000265
	(0.00063)	(0.00022)	(0.00019)
Reciprocal of Months Continuously Eligible	-0.618882 ***	0.068505 ***	0.075002 ***
	(0.03798)	(0.01322)	(0.01143)
Multiple Enrollment Segments	0.005028	-0.00628	-0.00293
	(0.01252)	(0.00436)	(0.00377)
Female	0.51077 ***	-0.005033	-0.010183 ***
	(0.01203)	(0.00419)	(0.00362)
Age	0.023532 ***	-0.000489	0.00009
	(0.00343)	(0.00119)	(0.00103)
Age-Squared	-0.000248 ***	0.00002	0.00001
	(0.00004)	(0.00001)	(0.00001)
Physician to Population Ratio	1.738782 ***	0.25142 ***	0.175279 ***
	(0.07364)	(0.02564)	(0.02217)
Elapsed Time	0.020732 ***	0.000965	-0.000151
	(0.00183)	(0.00064)	(0.00055) ***
R-Squared	**0.0276**	**0.0025**	**0.0036**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Inpatient Professional Costs	Log of Emergency Room Costs	Log of Outpatient Costs
Intercept	0.014596	0.708128 ***	0.068747
	(0.01960)	(0.03298)	(0.04695)
Federal Waiver Status	-0.005154	0.054128 ***	-0.018368
	(0.00749)	(0.01260)	(0.01794)
Open Enrollment	-0.018582 ***	-0.001909	-0.033241 **
	(0.00649)	(0.01092)	(0.01554)
Enrollment through Review of Medicaid Denials	-0.003619	-0.005659	-0.036225 **
	(0.00607)	(0.01022)	(0.01455)
Hospital Payments Reduced by Half	-0.002729	0.04627 ***	-0.030934 **
	(0.00650)	(0.01095)	(0.01558)
Hospital Payments Eliminated	-0.030547 ***	-0.116175 ***	-0.410235 ***
	(0.00977)	(0.01643)	(0.02339)
Months Continuously Eligible	-0.000603 ***	-0.00008	-0.002551 ***
	(0.00016)	(0.00028)	(0.00039)
Reciprocal of Months Continuously Eligible	0.034031 ***	-0.046038 ***	-0.243595 ***
	(0.00993)	(0.01671)	(0.02379)
Multiple Enrollment Segments	-0.00372 ***	0.017408 ***	0.003495
	(0.00327)	(0.00551)	(0.00784)
Female	-0.002237	-0.006143	0.166939 ***
	(0.00315)	(0.00529)	(0.00754)
Age	-0.000469	-0.013169 ***	0.007723 ***
	(0.00090)	(0.00151)	(0.00215)
Age-Squared	0.00002 *	0.000101 ***	-0.00004 *
	(0.00001)	(0.00002)	(0.00003)
Physician to Population Ratio	0.173721 ***	0.367308 ***	0.863839 ***
	(0.01926)	(0.03240)	(0.04612)
Elapsed Time	0.001032 **	-0.006272 ***	0.005705 ***
	(0.00048)	(0.00081)	(0.00115)
R-Squared	**0.0018**	**0.0182**	**0.0195**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Office Visit Costs	Log of Physician Service Costs	Log of Primary Care Physician Costs
Intercept	-0.091588	0.04394	0.077505 **
	(0.06064)	(0.05575)	(0.03784)
Federal Waiver Status	-0.254826 ***	-0.23079 ***	-0.098737 ***
	(0.02317)	(0.02130)	(0.01446)
Open Enrollment	0.027999	-0.074408 ***	-0.012695
	(0.02007)	(0.01845)	(0.01252)
Enrollment through Review of Medicaid Denials	-0.090265 ***	-0.081544 ***	-0.043365 ***
	(0.01879)	(0.01728)	(0.01173)
Hospital Payments Reduced by Half	-0.090835 ***	-0.075469 ***	-0.0218 *
	(0.02012)	(0.01850)	(0.01256)
Hospital Payments Eliminated	-0.418631 ***	-0.354636 ***	-0.14918 ***
	(0.03022)	(0.02778)	(0.01885)
Months Continuously Eligible	-0.001618 ***	-0.002204 ***	-0.000965 ***
	(0.00051)	(0.00047)	(0.00032)
Reciprocal of Months Continuously Eligible	-0.565932 ***	-0.384329 ***	-0.175875 ***
	(0.03072)	(0.02824)	(0.01917)
Multiple Enrollment Segments	0.014352	0.018352 **	0.030706 ***
	(0.01013)	(0.00931)	(0.00632)
Female	0.473638 ***	0.324716 ***	0.153508 ***
	(0.00973)	(0.00895)	(0.00607)
Age	0.024514 ***	0.011743 ***	-0.000825
	(0.00277)	(0.00255)	(0.00173)
Age-Squared	-0.000253 ***	0.00005	0.00008 ***
	(0.00003)	(0.00003)	(0.00002)
Physician to Population Ratio	0.522225 ***	0.767198 ***	0.138414 ***
	(0.05957)	(0.05477)	(0.03717)
Elapsed Time	0.021704 ***	0.016336 ***	0.007319 ***
	(0.00148)	(0.00136)	(0.00092)
R-Squared	**0.0262**	**0.0208**	**0.0128**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Specialty Care Costs	Log of Other Professional Costs	Log of Medical Care Costs
Intercept	-0.076248	-0.136775 ***	-0.226006 ***
	(0.04682)	(0.04554)	(0.04222)
Federal Waiver Status	-0.159041 ***	-0.103715 ***	-0.101713 ***
	(0.01789)	(0.01740)	(0.01613)
Open Enrollment	-0.076318 ***	0.08028 ***	0.016884
	(0.01550)	(0.01507)	(0.01397)
Enrollment through Review of Medicaid Denials	-0.056998 ***	-0.033447 **	-0.046748 ***
	(0.01451)	(0.01411)	(0.01308)
Hospital Payments Reduced by Half	-0.067981 ***	-0.044769 ***	-0.032818 **
	(0.01554)	(0.01511)	(0.01401)
Hospital Payments Eliminated	-0.249504 ***	-0.184397 ***	-0.220999 ***
	(0.02333)	(0.02269)	(0.02104)
Months Continuously Eligible	-0.001641 ***	-0.000351	-0.00073 **
	(0.00039)	(0.00038)	(0.00035)
Reciprocal of Months Continuously Eligible	-0.21746 ***	-0.269977 ***	-0.162395 ***
	(0.02372)	(0.02307)	(0.02139)
Multiple Enrollment Segments	-0.005318	-0.011909	-0.002313
	(0.00782)	(0.00761)	(0.00705)
Female	0.195758 ***	0.224146 ***	0.157355 ***
	(0.00751)	(0.00731)	(0.00678)
Age	0.013147 ***	0.020209 ***	0.013968 ***
	(0.00214)	(0.00208)	(0.00193)
Age-Squared	-0.000116 ***	-0.000299 ***	-0.000107 ***
	(0.00003)	(0.00003)	(0.00002)
Physician to Population Ratio	0.746614 ***	0.078877 *	-0.02961
	(0.04600)	(0.04474)	(0.04148)
Elapsed Time	0.011011 ***	0.010405 ***	0.012254 ***
	(0.00114)	(0.00111)	(0.00103)
R-Squared	**0.0115**	**0.0111**	**0.0102**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Surgery Costs	Log of Ancillary Costs	Log of Mental Health/ Substance Abuse Costs
Intercept	-0.019484	0.059427 *	-0.130632 ***
	(0.04870)	(0.03354)	(0.02696)
Federal Waiver Status	-0.165467 ***	-0.080756 ***	-0.03167 ***
	(0.01861)	(0.01281)	(0.01030)
Open Enrollment	-0.055512 ***	-0.017002	0.005653
	(0.01612)	(0.01110)	(0.00892)
Enrollment through Review of Medicaid Denials	-0.058139 ***	-0.027388 ***	-0.003557
	(0.01509)	(0.01039)	(0.00835)
Hospital Payments Reduced by Half	-0.060375 ***	-0.024446 **	-0.003158
	(0.01616)	(0.01113)	(0.00895)
Hospital Payments Eliminated	-0.298705 ***	-0.159439 ***	-0.066197 ***
	(0.02427)	(0.01671)	(0.01343)
Months Continuously Eligible	-0.001647 ***	-0.000793 ***	-0.000185
	(0.00041)	(0.00028)	(0.00023)
Reciprocal of Months Continuously Eligible	-0.325181 ***	-0.120088 ***	-0.094843 ***
	(0.02467)	(0.01699)	(0.01366)
Multiple Enrollment Segments	0.032267 ***	0.017329 ***	-0.025582 ***
	(0.00814)	(0.00560)	(0.00450)
Female	0.259491 ***	0.184388 ***	0.046743 ***
	(0.00782)	(0.00538)	(0.00433)
Age	0.00853 ***	-0.001373	0.014202 ***
	(0.00223)	(0.00153)	(0.00123)
Age-Squared	0.00002	0.00006 ***	-0.00021 ***
	(0.00003)	(0.00002)	(0.00001)
Physician to Population Ratio	0.672339 ***	0.216793 ***	0.473324 ***
	(0.04784)	(0.03295)	(0.02648)
Elapsed Time	0.013735 ***	0.006984 ***	0.001126 *
	(0.00119)	(0.00082)	(0.00066)
R-Squared	**0.0181**	**0.0147**	**0.0076**

Appendix Table 6-1

Logistic Regression of Utilization Among SCHAP Adult Enrollees

Variable	Probability of a Hospitalization	Probability of an Ambulatory Visit	Probability of an ER Visit
Intercept	-6.5467 ***	-1.2246 ***	-4.5285 ***
	(1.355)	(0.334)	(0.679)
Age	0.1056	0.0515 ***	0.1376 ***
	(0.064)	(0.017)	(0.036)
Age-Squared	-0.00082	-0.00039 *	-0.00212 ***
	(0.001)	(0.000)	(0.000)
Male	-0.4796 **	-0.7402 ***	-0.164
	(0.200)	(0.056)	(0.103)
White	0.3054	0.4219 ***	0.0744
	(0.240)	(0.066)	(0.122)
Above FPL	0.2707	-0.0496	-0.0274
	(0.226)	(0.061)	(0.112)
Horry County	-0.7326 ***	0.0307	-0.0838
(Marion and Other Counties omitted)	(0.221)	(0.074)	(0.136)
Year (1993 omitted)			
1994	-0.2794	0.2236 **	0.558 ***
	(0.313)	(0.094)	(0.192)
1995	-0.1966	0.417 ***	0.5965 ***
	(0.344)	(0.103)	(0.205)
Season (Winter omitted) (Winter Omitted)			
Spring	0.6937	-0.1096	0.0137
	(0.430)	(0.127)	(0.232)
Summer	-0.1538	-0.0958	0.0846
	(0.370)	(0.100)	(0.182)
Fall	0.3238	-0.1001	-0.1309
	(0.407)	(0.115)	(0.216)
Quarter	0.1946	-0.1459 ***	-0.1599 **
	(0.168)	(0.044)	(0.082)
Quarter-Squared	-0.0278	0.00732	0.0089
	(0.019)	(0.005)	(0.009)
n	**5620**	**5620**	**5620**
-2 Log Likelihood	**1045.02**	**7433.47**	**2953.86**
Chi-square	**46.022** ***	**332.6** ***	**57.859** ***

Appendix Table 6-1 (continued)

Logistic Regression of Utilization Among SCHAP Adult Enrollees

Variable	Probability of a Physician Visit	Probability of a Primary Care Visit	Probability of a Specialist Visit
Intercept	-1.3911 ***	-1.7702 ***	-3.3918 ***
	(0.339)	(0.354)	(0.495)
Age	0.0544 ***	0.0525 ***	0.0708 ***
	(0.017)	(0.018)	(0.024)
Age-Squared	-0.00041 *	-0.00046 **	-0.00055 *
	(0.000)	(0.000)	(0.000)
Male	-0.7809 ***	-0.7583 ***	-0.5554 ***
	(0.056)	(0.058)	(0.079)
White	0.4337 ***	0.3999 ***	0.3835 ***
	(0.067)	(0.070)	(0.095)
Above FPL	-0.052	-0.081	-0.0595
	(0.061)	(0.063)	(0.084)
Horry County	0.0511	0.504 ***	-0.5803 ***
(Marion and Other Counties omitted)	(0.075)	(0.082)	(0.095)
Year (1993 omitted)			
1994	0.1947 **	0.2682 ***	0.0732
	(0.095)	(0.097)	(0.135)
1995	0.3922 ***	0.3919 ***	0.3003 **
	(0.104)	(0.106)	(0.145)
Season (Winter omitted)			
(Winter Omitted)			
Spring	-0.1786	-0.2346 *	0.31 *
	(0.129)	(0.132)	(0.180)
Summer	-0.1473	-0.1992 *	0.2609 *
	(0.101)	(0.103)	(0.142)
Fall	-0.1214	-0.2105 *	0.2712 *
	(0.116)	(0.119)	(0.165)
Quarter	-0.1419 ***	-0.1714 ***	-0.0313
	(0.045)	(0.046)	(0.061)
Quarter-Squared	0.00604	0.0067	-0.00026
	(0.005)	(0.005)	(0.006)
n	**5620**	**5620**	**5620**
-2 Log Likelihood	**7325.1**	**7002.11**	**4548.09**
Chi-square	**363.33** ***	**380.322**	**168.328** ***

Appendix Table 6-2

Logistic Regression of Utilization Among SCHAP, AFDC, and Disabled Adults

Variable	Probability of a Hospitalization	Probability of an Ambulatory Visit	Probability of an ER Visit
Intercept	-5.6897 ***	-0.7295 ***	-3.0984 ***
	(0.502)	(0.186)	(0.280)
Age	0.0914 ***	0.0256 ***	0.0602 ***
	(0.023)	(0.009)	(0.013)
Age-Squared	-0.00086 ***	-0.00013	-0.00097 ***
	(0.000)	(0.000)	(0.000)
Male	0.0716	-0.5315 ***	-0.3007 ***
	(0.077)	(0.035)	(0.055)
White	0.1871 **	0.0748 **	-0.00788
	(0.079)	(0.036)	(0.054)
Horry County	-0.3718 ***	-0.0456	-0.0914
(Marion and Other Counties omitted)	(0.086)	(0.042)	(0.062)
Group (SCHAP omitted)			
AFDC	0.7122 ***	0.2545 ***	0.8981 ***
	(0.152)	(0.051)	(0.076)
Disabled	1.431 ***	-0.0415	0.8184 ***
	(0.110)	(0.039)	(0.065)
Year (1993 omitted)			
1994	-0.1379	0.0209	0.0857
	(0.110)	(0.051)	(0.077)
1995	-0.1416	0.0242	0.06
	(0.117)	(0.055)	(0.082)
Season (Winter omitted)			
Spring	0.4078 **	0.0208	0.0843
	(0.161)	(0.073)	(0.108)
Summer	0.1317	-0.0526	0.0163
	(0.135)	(0.059)	(0.089)
Fall	0.0942	-0.0785	-0.0401
	(0.156)	(0.067)	(0.102)
Quarter	-0.088	0.0637 **	-0.0362
	(0.057)	(0.025)	(0.038)
Quarter-Squared	0.00279	-0.00693 ***	0.00261
	(0.006)	(0.003)	(0.004)
n	**15458**	**15458**	**15458**
-2 Log Likelihood	**5876**	**21004**	**11236**
Chi-square	**413.24** ***	**411.86** ***	**348.55** ***

Appendix Table 6-2 (continued)

Logistic Regression of Utilization Among SCHAP, AFDC, and Disabled Adults

Variable	Probability of a Physician Visit	Probability of a Primary Care Visit	Probability of a Specialist Visit
Intercept	(0.218)	-1.3864 ***	-1.658 ***
	0.0417 ***	(0.194)	(0.210)
Age	(0.010)	0.0467 ***	0.0443 ***
	-0.00048 ***	(0.009)	(0.010)
Age-Squared	(0.000)	-0.00031 ***	-0.00026 **
	-0.3553 ***	(0.000)	(0.000)
Male	(0.041)	-0.5867 ***	-0.6031 ***
	0.0622	(0.036)	(0.038)
White	(0.041)	0.0766 **	0.00509
	-0.0492	(0.037)	(0.039)
Horry County	(0.048)	-0.0884 **	0.0877 *
(Marion and Other Counties omitted)		(0.042)	(0.046)
Group (SCHAP omitted)			
AFDC	0.8497 ***	-0.2275 ***	-0.5957 ***
	(0.059)	(0.053)	(0.057)
Disabled	0.6293 ***	-0.3193 ***	-0.5 ***
	(0.048)	(0.040)	(0.043)
Year (1993 omitted)			
1994	0.0543	0.0265	0.0912
	(0.059)	(0.053)	(0.057)
1995	-0.0162	0.0565	0.1705 ***
	(0.063)	(0.057)	(0.061)
Season (Winter omitted)			
Spring	(0.084)	-0.1319 *	-0.2534 ***
	0.0865	(0.075)	(0.080)
Summer	(0.068)	-0.1266 **	-0.1887 ***
	-0.00597	(0.060)	(0.064)
Fall	(0.078)	-0.1244 *	-0.18 **
		(0.069)	(0.073)
Quarter	-0.0173	0.1154 ***	0.0739 ***
	(0.029)	(0.026)	(0.027)
Quarter-Squared	0.000685	-0.0108 ***	-0.00836 ***
	(0.003)	(0.003)	(0.003)
n	**15458**	**15458**	**15458**
-2 Log Likelihood	**16878**	**20273**	**18466**
Chi-square	**440.01** ***	**570.86** ***	**662.6** ***

Appendix Table 8-1

Determinants of Access in Maine (MHP): Impact of Program Termination

Variable	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Intercept	0.94 (1.52)	-1.41 (1.01)	-1.71 (1.19)	-2.36 ** (1.17)	-1.2 (0.97)	0.76 (1.13)	0.34 (1.19)	0.84 (1.78)
Age	0.01 (0.02)	-0.01 (0.01)	0 (0.02)	-0.01 (0.02)	0 (0.01)	0.04 ** (0.02)	0 (0.02)	0.02 (0.02)
Gender (1=Male)	0.26 (0.46)	-0.54 * (0.32)	-0.17 (0.35)	0.05 (0.34)	-0.35 (0.31)	0.52 (0.32)	-0.52 (0.37)	-0.07 (0.38)
Race (1=White)	1.18 * (0.68)	-0.65 (0.66)	-0.99 * (0.59)	0.59 (0.81)	-0.04 (0.64)	-0.32 (0.70)	0.63 (0.81)	0.43 (0.94)
Education (1=High School Graduate or Higher)	0.67 (0.43)	1.33 *** (0.45)	0.03 (0.43)	-0.5 (0.33)	0.83 ** (0.39)	0.72 * (0.38)	-0.32 (0.47)	0.36 (0.39)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	1.02 (0.73)	0.04 (0.42)	0.34 (0.42)	0.15 (0.44)	-0.68 (0.44)	0.16 (0.42)	0.18 (0.49)	0.67 (0.48)
Part-time	-0.26 (0.46)	0.47 (0.35)	0.02 (0.40)	0.4 (0.37)	0.2 (0.33)	0.46 (0.34)	0.15 (0.47)	0.65 (0.45)
Not working (omitted)								

Appendix Table 8-1 (continued)

Determinants of Access in Maine (MHP): Impact of Program Termination

	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Variable								
Self-Reported Health Status								
Very Good	-0.06	-0.52	0.68	0.97	-0.42	-1.63 ***	0.66	-0.25
	(0.75)	(0.43)	(0.67)	(0.78)	(0.42)	(0.58)	(0.66)	(0.72)
Good	0.58	-0.75 *	0.99	1.3 *	-0.8 *	-1.26 **	-0.37	-0.85
	(0.73)	(0.45)	(0.63)	(0.72)	(0.44)	(0.58)	(0.61)	(0.74)
Fair/Poor	-0.02	0.27	1.41 **	1.59 **	-0.24	-1.24 **	0.1	0.31
	(0.78)	(0.51)	(0.69)	(0.76)	(0.50)	(0.63)	(0.66)	(0.78)
Excellent (omitted)								
Physical health interferes with social activities	-0.01 (0.60)	0.53 (0.39)	-0.78 ** (0.38)	0.02 (0.40)	0.3 (0.37)	0.49 (0.39)	0.83 * (0.45)	0.21 (0.43)
Mental health interferes with social activities	-0.41 (0.50)	0.46 (0.39)	0.49 (0.41)	-0.37 (0.40)	0.2 (0.36)	-0.01 (0.31)	0.55 (0.41)	0.42 (0.42)
Health limits light activities	-0.62 (0.58)	-3.51 *** (1.04)	-1.08 * (0.56)	-0.04 (0.47)	-1.58 ** (0.63)	-0.47 (0.44)	0.19 (0.51)	-0.16 (0.52)
Enrollees	-0.46	-1.11 ***	0.1	-0.44	-0.82 ***	-0.32	1.21 ***	-0.72 *
	(0.49)	(0.31)	(0.33)	(0.33)	(0.29)	(0.31)	(0.37)	(0.41)
R-square	0.0449	0.1831	0.0453	0.0470	0.1063	0.0691	0.0903	0.0489
n	462	460	458	458	459	462	459	460
chi-square	17.02	73.36	20.12	20.68	46.23	35.16	38.47	21.04

*p<0.10 **p<0.05 ***p<0.01

Appendix Table 8-2

Determinants of Satisfaction in Maine (MHP): Impact of Program Termination

	Satisfaction With							
	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Variable								
Intercept	3.08 ***	5.94 ***	3.27 **	2.8 ***	2.77 **	4.77 ***	3.25 ***	2.44 ***
	(1.08)	(1.36)	(1.28)	(1.08)	(1.12)	(1.20)	(0.95)	(0.91)
Age	-0.01	-0.03	-0.02	-0.01	-0.03 *	-0.03 **	-0.03 **	-0.03 ***
	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
Gender (1=Male)	0.25	-0.18	0.07	-0.19	0.62	-0.07	0.38	0.79 ***
	(0.31)	(0.38)	(0.32)	(0.30)	(0.39)	(0.36)	(0.29)	(0.27)
Race (1=White)	-0.67	-0.52	-0.28	-0.33	0.28	-0.83	0.04	0.15
	(0.66)	(0.83)	(0.83)	(0.60)	(0.56)	(0.77)	(0.60)	(0.50)
Education (1=High School Graduate or Higher)	0.02	-1.01	-0.01	-0.31	-0.36	-0.54	-0.89 **	-0.61 *
	(0.37)	(0.63)	(0.43)	(0.33)	(0.44)	(0.50)	(0.35)	(0.33)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	-0.08	-0.23	-0.25	0.03	-0.2	0.06	0.18	0.14
	(0.36)	(0.49)	(0.41)	(0.37)	(0.45)	(0.53)	(0.40)	(0.36)
Part-time	0.2	0.03	-0.52	0.02	-0.09	-0.56	0.58	0.63 **
	(0.35)	(0.48)	(0.41)	(0.35)	(0.40)	(0.40)	(0.35)	(0.31)
Not working (omitted)								

Appendix Table 8-2 (continued)

Determinants of Satisfaction in Maine (MHP): Impact of Program Termination

	Satisfaction With							
	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Variable								
Self-Reported Health Status								
Very Good	-0.62	0.6	0.3	0.63	0.58	1.11 **	-0.14	0.31
	(0.46)	(0.64)	(0.53)	(0.56)	(0.53)	(0.55)	(0.47)	(0.42)
Good	-0.33	0.16	0.58	-0.46	0.91 *	1.07 **	-0.02	0.5
	(0.48)	(0.58)	(0.54)	(0.54)	(0.51)	(0.53)	(0.46)	(0.42)
Fair/Poor	-0.35	-0.03	0.72	-0.12	1.49 ***	0.92 *	0.18	0.85 *
	(0.54)	(0.63)	(0.58)	(0.65)	(0.57)	(0.55)	(0.54)	(0.50)
Excellent (omitted)								
Physical health interferes with social activities	-0.04 (0.33)	-0.64 (0.52)	0.23 (0.39)	-0.39 (0.38)	-0.07 (0.42)	0.27 (0.39)	-0.28 (0.40)	-0.46 (0.35)
Mental health interferes with social activities	0.45 (0.32)	0.42 (0.48)	-0.16 (0.40)	0.65 * (0.36)	0.19 (0.40)	-0.03 (0.43)	0.52 (0.34)	0.27 (0.32)
Health limits light activities	0.83 (0.53)	0.09 (0.59)	-0.28 (0.48)	-0.05 (0.39)	-0.3 (0.57)	-0.28 (0.45)	0.03 (0.51)	0.15 (0.42)
Enrollees	-1.34 ***	-2.32 ***	-1.53 ***	-0.93 ***	-0.97 **	-1.21 ***	-0.9 ***	-1.34 ***
	(0.35)	(0.68)	(0.43)	(0.33)	(0.41)	(0.43)	(0.32)	(0.28)
R-square	**0.0683**	**0.1260**	**0.0767**	**0.0560**	**0.0453**	**0.0491**	**0.0545**	**0.1325**
n	**376**	**254**	**285**	**414**	**378**	**399**	**406**	**393**
chi-square	**30.36**	**32.19**	**25.20**	**27.11**	**21.22**	**22.14**	**27.75**	**60.30**

*p<0.10 **p<0.05 ***p<0.01

Appendix Table 8-3

Determinants of Access in South Carolina (SCHAP): Impact of Disenrollment

Variable	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Intercept	-2.46 ***	0.17	0.13	0.68 ***	-0.13	0.15	-0.13	-0.24
	(0.18)	(0.29)	(0.20)	(0.25)	(0.26)	(0.26)	(0.18)	(0.35)
Age	0.01 ***	0	0	-0.01 **	0	0	0	0
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Gender (1=Male)	0	0.12	-0.04	0.08	0.05	-0.02	0.1	-0.01
	(0.05)	(0.08)	(0.06)	(0.07)	(0.08)	(0.08)	(0.07)	(0.08)
Race (1=White)	0.04	-0.33 ***	-0.01	-0.18 **	-0.18 **	0.01	-0.08	0.03
	(0.05)	(0.09)	(0.06)	(0.08)	(0.09)	(0.09)	(0.07)	(0.11)
Education (1=High School Graduate or Higher)	0.11 ***	-0.03	-0.1	0.01	-0.11	-0.08	0.1	0.04
	(0.04)	(0.10)	(0.09)	(0.11)	(0.10)	(0.10)	(0.09)	(0.12)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	0.09	-0.18	-0.03	-0.32 **	-0.11	-0.13	0.1	0.19
	(0.08)	(0.14)	(0.07)	(0.13)	(0.15)	(0.14)	(0.09)	(0.16)
Part-time	0.07	0.05	-0.05	0.02	0.1	0.05	0.03	0.11
	(0.04)	(0.09)	(0.06)	(0.07)	(0.08)	(0.09)	(0.07)	(0.09)
Not working (omitted)								

Appendix Table 8-3 (continued)

Determinants of Access in South Carolina (SCHAP): Impact of Disenrollment

Variable	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Self-Reported Health Status								
Very Good	0.14 ***	0.08	-0.01	-0.02	0.06	0.04	-0.05	0.09
	(0.04)	(0.11)	(0.06)	(0.08)	(0.10)	(0.10)	(0.07)	(0.10)
Good	0.25 ***	-0.03	0.02	-0.09	-0.04	0	-0.01	0.19
	(0.07)	(0.12)	(0.08)	(0.10)	(0.11)	(0.12)	(0.09)	(0.14)
Fair/Poor	0.24 **	0.02	0.01	-0.1	0.06	-0.09	-0.2	0.01
	(0.11)	(0.18)	(0.14)	(0.16)	(0.15)	(0.16)	(0.14)	(0.14)
Excellent (omitted)								
Physical health interferes with social activities	-0.04	0.31 **	0.01	0.03	0.33 ***	0.22 *	0.08	-0.3 **
	(0.08)	(0.12)	(0.11)	(0.11)	(0.12)	(0.13)	(0.11)	(0.13)
Mental health interferes with social activities	-0.03	-0.24	0	-0.05	-0.26 *	-0.04	-0.17	0.04
	(0.07)	(0.14)	(0.13)	(0.13)	(0.15)	(0.14)	(0.11)	(0.14)
Health limits light activities	-0.01	0.25	-0.75 ***	0.57 **	0.35 **	0.52 **	0.57 **	-0.23
	(0.26)	(0.19)	(0.20)	(0.23)	(0.15)	(0.24)	(0.25)	(0.36)
Continuously enrolled	-0.07	0.21 **	-0.07	0.01	0.19 **	0.1	-0.22 ***	0.18 **
	(0.06)	(0.10)	(0.06)	(0.08)	(0.09)	(0.09)	(0.08)	(0.09)
R-square	**0.1719**	**0.1269**	**0.0937**	**0.0981**	**0.0900**	**0.0459**	**0.1064**	**0.0633**
n	**223**	**221**	**222**	**221**	**221**	**222**	**221**	**222**
chi-square								

*p<0.10 **p<0.05 ***p<0.01

SOURCE: Medicaid Expansion Demonstration Household Survey.

Appendix Table 8-4

Determinants of Satisfaction in South Carolina (SCHAP): Impact of Disenrollment

	Satisfaction With							
	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Variable								
Intercept	0.34	-0.01	0.6 *	0.18	0.16	0.49 *	0.49 *	0.19
	(0.32)	(0.38)	(0.35)	(0.31)	(0.27)	(0.26)	(0.28)	(0.25)
Age	0	0	-0.01 **	0	0	0	0	0
	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Gender (1=Male)	-0.11	0.16	0.01	0.07	0.1	-0.03	-0.01	0.09
	(0.09)	(0.12)	(0.10)	(0.10)	(0.09)	(0.09)	(0.08)	(0.08)
Race (1=White)	-0.17	-0.35 ***	-0.23 **	-0.06	-0.04	-0.32 ***	-0.16	0.08
	(0.11)	(0.12)	(0.11)	(0.10)	(0.11)	(0.10)	(0.10)	(0.09)
Education (1=High School Graduate or Higher)	-0.18 *	0.04	0	-0.09	-0.26 ***	-0.17 **	-0.17	-0.17
	(0.11)	(0.13)	(0.13)	(0.12)	(0.10)	(0.08)	(0.11)	(0.11)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	0.04	0.02	-0.15	-0.09	-0.07	-0.14	-0.1	-0.14
	(0.16)	(0.17)	(0.19)	(0.18)	(0.15)	(0.12)	(0.13)	(0.14)
Part-time	0.08	-0.01	0.07	-0.01	0.08	0.11	0.1	0.17 *
	(0.09)	(0.12)	(0.10)	(0.10)	(0.09)	(0.10)	(0.08)	(0.09)
Not working (omitted)								

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Appendix Table 8-4 (continued)

Determinants of Satisfaction in South Carolina (SCHAP): Impact of Disenrollment

	Satisfaction With							
	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Variable								
Self-Reported Health Status								
Very Good	-0.05	-0.12	0.08	-0.03	-0.1	0.14	-0.01	-0.01
	(0.11)	(0.15)	(0.12)	(0.11)	(0.12)	(0.12)	(0.10)	(0.10)
Good	-0.18	-0.35 **	0.08	0.01	-0.05	-0.05	-0.28 **	-0.05
	(0.13)	(0.16)	(0.14)	(0.13)	(0.13)	(0.12)	(0.12)	(0.11)
Fair/Poor	-0.23	-0.14	0.13	0.31 *	0.31 **	-0.06	-0.21	-0.21
Excellent (omitted)								
Physical health interferes with social activities	-0.04	-0.15	-0.29 **	0.04	-0.01	-0.05	-0.24 *	-0.27 **
	(0.14)	(0.19)	(0.13)	(0.14)	(0.15)	(0.14)	(0.13)	(0.13)
Mental health interferes with social activities	-0.09	0.18	0.02	-0.03	-0.04	-0.05	0.09	-0.04
	(0.15)	(0.18)	(0.12)	(0.14)	(0.15)	(0.14)	(0.15)	(0.16)
Health limits light activities	0.69 **	0.63 **	-0.32	-0.19	0.03	0.03	0	0.37
	(0.33)	(0.25)	(0.22)	(0.22)	(0.15)	(0.16)	(0.16)	(0.23)
Continuously Enrolled	-0.01	-0.02	0.29 **	-0.01	0.02	-0.04	0.02	0.41 ***
	(0.11)	(0.13)	(0.11)	(0.11)	(0.11)	(0.10)	(0.10)	(0.09)
R-square	**0.0740**	**0.1921**	**0.1568**	**0.0345**	**0.0942**	**0.0860**		
n	**193**	**92**	**121**	**198**	**172**	**181**		
chi-square								

*p<0.10 **p<0.05 ***p<0.01

SOURCE: Medicaid Expansion Demonstration Household Survey.

10

Implications of the Medicaid Expansion Demonstration

This chapter summarizes and synthesizes the results of the evaluation of the Medicaid Expansion Demonstration. The demonstration funded three programs:

- The Maine Health Program (MHP), a statewide non-categorical, poverty-level Medicaid expansion for adults in Maine.
- The South Carolina Health Access Plan (SCHAP), an employer-based program for low-income workers and their dependents in Horry and Marion Counties, South Carolina; and
- Health Access Spokane (HAS), a program for low-income individuals and families in Spokane County, Washington.

We focus on implications of the Medicaid Expansion Demonstration with respect to program administration, enrollment impacts, utilization and costs, access and satisfaction, and employer participation.

We begin with an overview of the key accomplishments of the demonstration, followed by a discussion of the phase-down experience, and conclude with a summary of "lessons learned."

10.1 Key Accomplishments of the Medicaid Expansion Demonstration

Before proceeding with lessons learned from the demonstration, we would like to highlight three key accomplishments of the Medicaid Expansion Demonstration. First, the

Medicaid Expansion Demonstration enrolled 13,610 people across the three sites. Most of the participants were uninsured at the time they joined the demonstration (or they were shifted from State-funded programs for the uninsured).

Second, there can be no question that access to care was improved by the demonstration. However, measurement of access "impacts" is complex in a non-experimental design (i.e., in the absence of randomization). Unfortunately, our study could not model the impact of *obtaining* insurance coverage, due to lack of a baseline non-enrolled population that could be followed after the demonstration was implemented. Instead, we conducted longitudinal analyses showing the impact of the *loss* of insurance coverage on access and satisfaction. The likelihood of obtaining ambulatory care, especially in a non-hospital-based setting, declined after coverage was terminated. For example, upon disenrollment from SCHAP, the likelihood of a visit in the past three months declined from 60 percent to 39 percent. Concurrently, the likelihood of experiencing unmet need substantially increased (from 18 percent to 32 percent). Satisfaction with the cost of medical care dropped precipitously, following termination of coverage. Whereas 51 percent were very satisfied with medical care costs during SCHAP, only 10 percent were very satisfied after SCHAP. Similar impacts were observed in Maine, after the demonstration ended. Thus, we conclude that the demonstration improved access to care by eliminating financial barriers to care.

The third key accomplishment of the Medicaid Expansion Demonstration was the involvement of employers in the South Carolina program. SCHAP successfully enrolled eligible employees and dependents of eligible employers and provided a scaled-back package of Medicaid benefits. The program was extremely well received by employers.

10.2 Lessons Learned from the Medicaid Expansion Demonstration

Lesson 1: Administrative Complexity Should Not Be Underestimated

The three demonstration programs were more complex to administer than might have been anticipated. The three programs utilized different approaches, including piggybacking on the traditional Medicaid program in Maine, coordinating between two existing agencies in Washington, and establishing an entirely new field operation in South Carolina.

MHP built upon the existing Medicaid infrastructure and was viewed simply as another category of Medicaid eligibility. One might have expected a smooth implementation and operation as a result. However, the State encountered legislative resistance which placed the future of MHP in jeopardy, year after year, and hence distracted program staff from developing any innovations within the program. For example, Maine had planned to implement a primary care case management (PCCM) program as part of MHP to control utilization and minimize program costs. A pilot PCCM program was implemented for both Medicaid and MHP beneficiaries in two counties only a few months before MHP was terminated.

South Carolina devoted considerable resources to administering the SCHAP program, for example, through an extensive on-site effort of employer recruitment, individual enrollment, and program monitoring. Administrative expenses averaged 40 percent of total program costs, with a low of 26 percent in the final year of the program. This amounted to $58 per member per month in administrative expense. Clearly, a hallmark of the program was the level of "customer service" provided to both employers and employees. However, it would appear there were some "inefficiencies" introduced in administering the program on

such a small scale in two counties, and no opportunities to reap any economies by applying the knowledge or infrastructure from the demonstration to a larger geographic area.

From HAS, we observed the conflicts that can occur when a program is co-administered by two state agencies with different organizational styles, philosophies, motivations, and priorities. The Medicaid agency, which conceived of HAS, maintained a client advocacy orientation, while the Health Care Authority (HCA), which was charged with day-to-day operation of HAS, had a private insurance perspective. Initially, more attention was given to "learning to speak the same language" and resolving differences in the "cultures" of the administering agencies than to developing the infrastructure for eligibility determination, marketing, and education. None of the enrollment systems were automated at the time HAS was implemented. Additionally, the concept of targeted marketing was anathema to HCA staff. HCA staff also faced conflicting priorities. At the time HAS was being implemented, a state-subsidized health insurance program for low-income people, known as the Basic Health Plan (BHP), was being converted from a pilot phase to a permanent program. This meant that HCA was undergoing reorganization and expansion at the same time it was "burdened" with the additional responsibility of overseeing operations of HAS. This largely explains the low levels of enrollment of previously uninsured individuals in HAS.

On a more positive note, HAS served as a "learning experience" for other joint State initiatives between Medicaid and HCA. The introduction of BHP-Plus, a Medicaid extension for low-income children, was coordinated by HCA in July 1994. According to State Medicaid officials, this effort went much more smoothly as a result of experience gained

under the HAS demonstration.

Lesson 2: Enrollment Targets were not Easily Achieved

None of the three programs easily achieved their enrollment targets. The Maine Health Program (MHP) had originally set a target of 4,000 new enrollees (including approximately 2,000 rollovers from the State-funded MHP). Open enrollment yielded only 800 new eligibles; the remainder was identified through a review of Medicaid denials. SCHAP projected an average monthly enrollment of 1,300 members, with a first-year maximum of 1,390 at any one time; SCHAP staff expected the program to become fully subscribed very quickly. Clearly, this did not happen. Membership peaked at 1,211 in October 1995 – about 30 months into the program. Finally, HAS set a goal of 4,200 members, but after the first year, only 35 percent of this goal had been reached.

These demonstrations did not meet their enrollment targets for a number of reasons. SCHAP had narrow eligibility criteria which few employers could meet. Additionally, some employers were unwilling to offer a program to their low-income employees that provided a more generous benefit than was available to higher-income workers. The salient message of SCHAP is that income-based eligibility is not attractive to employers; instead, health insurance programs need to insure the entire group, perhaps with varying levels of subsidies based on income.

The reasons for low participation in Maine and Washington stem from the lack of marketing as well as volatility in the two programs. Neither Maine nor Washington committed significant resources to marketing the programs. A large share of the initial

enrollees were shifted from State-funded programs (the Maine Health Program and the Basic Health Plan) into the demonstration. Otherwise, word of mouth was the dominant mode of information about the program. Little formal outreach and marketing of the program was conducted. In Washington, program administrators were concerned that too much marketing would result in waiting lists, and did not want to turn people away. Interestingly, the plans were willing to finance State marketing efforts for HAS, but the State declined the offer.

Other factors accounting for low enrollment in Washington included a lack of local presence in the demonstration county (which was 260 miles away from the State Capitol); a lack of unified State support for the program; inadequate data systems for identifying and enrolling those who were eligible for HAS; and possible welfare stigma associated with HAS. Premature cancellation of the program was announced approximately 15 months after the program began because the State was unwilling to commit additional resources to conduct a large-scale marketing campaign. Ironically, enrollment climbed steadily after the media blitz denouncing the premature termination of the program. The HAS demonstration period also was marked by the "rise and fall" of health care reform in Washington State, which also served to divert attention away from the demonstration.

In Maine, program volatility also affected the program's enrollment history. The open enrollment took place at the same time the Governor was proposing to eliminate the program. Little advance notice was provided of the open enrollment period (less than 10 days). As a result, only 800 new enrollees came from the open enrollment. Instead, most of the new enrollees (about 3,000) were identified through a review of Medicaid denials for MHP eligibility. No new enrollments were admitted after December 1993 until the program ended

in March 1995.

The experience of the Medicaid Expansion Demonstration demonstrates that simply offering a program to low-income, uninsured individuals, families, or employees does not ensure they will know about the program or choose to participate. Moreover, program volatility negatively affects States' willingness to market the program and individuals' willingness to join the program.

Lesson 3: Program Orientation Affected Enrollment and the Resulting Risk Pool

Two of the programs – SCHAP and HAS – pursued innovative efforts to privatize or decentralize Medicaid-like coverage, by positioning the coverage as "insurance" rather than simply "claims payment." Both programs deliberately avoided a direct association with Medicaid. In contrast, MHP was a direct extension of the Medicaid program. The three programs provide an interesting contrast in the reasons enrollees cited for joining, which also mirror the programs' orientation.

We found that enrollees in Maine were far more likely to join MHP because of a "current medical condition," reflecting the role of the Maine medical community (especially hospitals) in referring their patients to the program. The program was developed and implemented as if MHP were another category of Medicaid, and like Medicaid, enrollees perceived MHP as a way to pay medical bills when they were sick. The program was not marketed as an insurance product, and enrollees did not seem to understand that they could not re-enroll at will. Consequently many enrollees declined to complete the six-month recertification when not actively receiving treatment and lost eligibility.

SCHAP enrollees, on the other hand, were most likely to join the demonstration to protect against a "possible future accident or illness," reflecting the insurance orientation of the program. SCHAP was deliberately "de-linked" from Medicaid and marketed as an employer-based insurance product. As an employment-based program, SCHAP enrollees were in better health than those enrolled in the other two programs.

HAS, too, was disassociated from Medicaid, and was positioned as a private insurance product like the Basic Health Plan. As a result, enrollees tended to report they joined HAS to protect against future health care needs, as well to afford routine checkups, consistent with the managed care orientation of the program. (Moreover, when compared with traditional medical population, SCHAP enrollees were lower cost.)

We have observed, therefore, that each program's orientation and implementation directly affects the risk profile. MHP's association with Medicaid tended to attract a sicker risk profile. However, from an insurance perspective, these risks may not be insurable if individuals enroll when they need care, and disenroll when they no longer need care (Wintringham and Bice, 1985). On the other hand, employment-based coverage, like SCHAP, "self-selects" those who are working and typically are healthier than those who are not working. It would appear that individual coverage through a publicly-subsidized insurance program, such as HAS, attracts a broader mix of enrollees – poor and nonpoor, employed and unemployed, and healthy and sick.

Lesson 4: Private Insurance "Crowd-Out" Was Not a Problem

A concern with any Medicaid expansion is whether individuals will drop their private

insurance coverage in favor of publicly-funded or subsidized coverage (Cutler and Gruber, 1995; Dubay and Kenney, 1997). Across the three programs, no more than 15 percent of those surveyed reported having private coverage prior to joining the demonstration. Many of these were likely to have been underinsured.

The highest level of private coverage was found in Maine (13.6 percent), where health status was poorest, suggesting that MHP enrollees may have dropped their private coverage to obtain richer benefits as well as to eliminate cost-sharing.

In South Carolina, where 10 percent reported private coverage prior to joining SCHAP, the employer could not have offered health insurance within the last 12 months. Those who reported prior coverage could have obtained it through a spouse or from a previous job. Interestingly, few insurance brokers in the two counties even knew SCHAP existed.

HAS enrollees had the lowest level of prior private coverage (7.1 percent). One possible explanation is that the level of marketing and outreach was so limited that most people with private coverage would not have known about HAS. Indeed, the demonstration attracted predominantly those who were uninsured or who were insured through a state-subsidized program. Most individuals enrolled in the demonstration reported that they could not afford health insurance coverage (71 percent in Maine and 46 percent in Washington) when they were employed. Very few individuals reported that they did not *want* health coverage.

The analysis, therefore, does not provide evidence that private insurance was "crowded out" by expansion of Medicaid Eligibility under the demonstration.

Lesson 5: Variations in Program Structure Were Associated with Variations in Access and Satisfaction

Our analysis has shown that the structure of the service delivery system can affect levels of access and satisfaction. The capitated managed care system under HAS performed relatively more favorably than the other two programs. Of particular note were the lower levels of hospital-based ambulatory care and higher levels of office-based care in Washington, relative to the other two programs. For example, 66 percent of HAS enrollees but only 48 percent of MHP enrollees had an ambulatory visit in a three-month period. This is likely a function of the availability of a "medical home" in HAS. Unmet need was significantly lower in Washington than in the other two states. Satisfaction also tended to be higher in the capitated system in Washington than in the two fee-for-service programs. In particular, satisfaction with the cost of care was highest in Washington (78 percent were very satisfied), intermediate in South Carolina (61 percent), and lowest in Maine (45 percent).

A general insight of the Medicaid Expansion Demonstration is that managed care is acceptable to low-income populations. The results reveal a fundamental irony of Medicaid managed care. Contrast, for example, the features of the HAS and MHP programs. HAS restricted access to a network of providers established by the two managed care plans. In theory, MHP offered unrestricted access to providers under a fee-for-service delivery system. In reality, however, the appearance of freedom-of-choice was just an appearance, given the unwillingness of many providers to participate in Maine's Medicaid program. Differences in the level of satisfaction with regard to provider choice seem to reflect an anomaly of Medicaid managed care – restricting freedom-of-choice through a private managed care provider

network can actually expand access for Medicaid beneficiaries. Anecdotal evidence obtained during the case study suggests that provider capacity under HAS exceeded that under traditional medicaid fee-for-service. Some providers opted to participate through the managed care program although they closed their practices to Medicaid fee-for-service patients. Moreover, perceived quality of care is higher.

Lesson 6: Aggressive Program Management Can Result in Under-Utilization

We surmise that the aggressive management of utilization and costs by SCHAP staff contributed to lower levels of utilization relative to enrollees in the other two states, and consequently, higher levels of unmet need reported by SCHAP enrollees. Anecdotal evidence from the case study suggests that SCHAP staff monitored and followed up on every hospitalization and emergency room visit. Additionally, according to the SCHAP Final Report, members were advised during orientation that "if they abused the program or did not follow the guidelines for obtaining treatment, they could endanger the economic stability of the program or face paying the total bill themselves." Conversely, SCHAP staff apparently portrayed the message that low expenditures could result in expansion of the program. We speculate that such messages, although well-intentioned, may have encouraged subscribers to not seek care or to delay seeking care due to concerns about losing their own coverage, or threatening others' coverage. However, this was never confirmed in the case study interviews.

Interestingly, we observed that levels of unmet need declined over time among continuous SCHAP enrollees. These findings are consistent, too, with the utilization and cost

results, which showed an upward trend over the three years. This suggests that SCHAP staff were less vigilant in their management of utilization and costs as the SCHAP program became more established and the future of the demonstration was in less jeopardy. (Moreover, SCHAP enrolees' recall of the orientation message likely diminished over time.) Our conclusion, therefore, is that under-utilization can occur if care is "over-managed."

Lesson 7: Concerns About Pent-up Demand were Unfounded

We examined the relationship between length of enrollment and patterns of utilization and cost to determine whether there was any evidence of pent-up demand. Some have found a "start-up effect," whereby those who were uninsured had higher levels of use when they first obtained insurance coverage, due to previous unmet needs (Wintringham and Bice, 1985). However, as might be expected, recent evidence suggests that pent-up demand is most profound among those without insurance for at least one year (Martin *et al.*, 1997).

In general, we did not find evidence of pent-up demand in our analyses. Utilization was reasonably consistent over time or tapered off gradually as length of enrollment increased. Except in one instance, we did not find unusually high levels of utilization or costs during the initial months of enrollment. The one exception was in Maine, where hospital use was highest in the first month of the program and then steadily declined. However, this is unlikely to reflect true pent-up demand, but rather, is more likely an artifact of the enrollment process. Anecdotal evidence suggests that hospitals were enrolling patients already admitted in order to get their bills paid. Our results are certainly consistent with that scenario. It seems improbable that hospital admissions could have been scheduled on such short notice.

Our analysis should be comforting to managed care plans that are considering coverage of low-income, previously uninsured populations. From a rate-setting perspective, the results imply that utilization is not extraordinarily high in the first few months of enrollment. Our analysis has not addressed the *administrative costs* associated with turnover in programs for low-income populations. The average length of enrollment was 13 to 14 months across the three demonstration programs, although substantial proportions were enrolled for six months or less (24 percent in MHP, 34 percent in SCHAP, and 33 percent in HAS). Our results suggest that enrollment turnover may have less of an adverse effect on health care costs than on administrative costs.

Lesson 8: Elimination of Cost-Sharing Stimulated Higher Levels of Utilization

Although we found no evidence of pent-up demand, we did find that utilization patterns varied depending on the benefit structure. We compared probabilities and levels of use between two programs in Washington State, the Health Access Spokane demonstration and the Basic Health Plan (BHP). BHP was a publicly-subsidized insurance program for low-income individuals and families, which required a monthly premium and copayments at point-of-service, and had a 12-month pre-existing condition clause. The maximum premium payment for BHP was $600 per year for individuals and $1,200 for families at the time HAS began. Additionally, the BHP copayments were not inconsequential for a low-income population: $8 to $10 per doctor visit (excluding preventive care), $25 to $50 per emergency room visit, and up to $100 per hospital stay. HAS, on the other hand, had no premiums, no copayments, and no limits on use for pre-existing conditions.

As would be expected, HAS members had a significantly higher probability of ambulatory care use than BHP members (also low-income and living in Spokane County), in the range of 50 percent higher. Similarly, the probability of hospitalization was 46 percent higher. It is unlikely, however, that this entire differential is due to variations in the benefit structure. Unobserved differences in health status between HAS and BHP members likely account for some (but an unknown) magnitude of the utilization differential. For example, we found that 14 percent of HAS enrollees were in fair or poor health, compared to 9 percent of BHP enrollees in 1989 (Diehr *et al.*, 1993). Assuming the sicker BHP enrollees opted to enroll in HAS, the actual differential may be even greater.

The lack of cost-sharing in HAS was a source of consternation within HCA (the agency responsible for day-to-day operations of HAS). They felt that HAS should institute a copayment, to instill responsibility among members in making prudent decisions about health care utilization. The absence of "demand-side" cost-sharing, they argued, resulted in overutilization.

It would also appear from the utilization analyses that utilization levels differed between the two managed care organizations which served both HAS and BHP members. Enrollees in Group Health Northwest (GHNW), which was predominantly a group-model HMO, had significantly lower levels of use than those covered by Medical Services Corporation (MSC), an IPA-model. One implication is that the salaried payment arrangement among GHNW providers resulted in more effective utilization controls than the discounted fee-for-service arrangement in MSC. Thus, "supply-side" financial incentives appear to have been significant determinants of utilization as well.

Additional research is needed to model the impact of cost-sharing on utilization behavior, specifically within a low-income population. More sophisticated risk adjustment is required to control for potential selection effects of sicker people into high-option plans

Lesson 9: The Administrative Costs of Coordinating Employer-Based and Other Coverage are High

All three programs initially had some provision for employer participation, as mandated in OBRA-90. The experience in Maine and Washington has demonstrated the complexities of developing an employer-based subsidy program (or Medicaid "buy-in").

In Maine, for example, the State screened MHP applicants for the availability of private coverage. The State paid the premium for private coverage if it was found to be "cost-effective" relative to enrolling the beneficiary in MHP. The State offered wraparound coverage for benefits covered under MHP but not offered through employer-based plans. Originally, by statute, MHP was required to pay the employer or insurer for the employee's premium share. However, most employers were unwilling to participate on this basis because of the administrative difficulty of processing premium payments on other than a payroll deduction basis. Subsequent legislation authorized MHP to reimburse enrollees directly for the premium share. Only about 2.5 percent of MHP enrollees participated through employer-based plans, mostly with direct reimbursement to employees. Thus, most employers had little or no direct involvement with MHP. This is consistent with a recent study of three states, which found small enrollments and minimal cost-savings in their Health Insurance Premium Payment (HIPP) programs (, 1997).

An opposite approach was planned in Washington, whereby the State intended to ask

the employer of eligible HAS beneficiaries who were employed to contribute to the premium HAS paid to the two participating HMOs. Thus, the State hoped to find private employers who would subsidize HAS. The employer subsidy was never implemented because of program staff concerns about the temporary duration of HAS and the potential conflict that could be created if the employer paid for some workers but not others. Moreover, the HMOs were concerned about the potential impact on their small group and individual products. Thus, the State abandoned all plans for an employer component under HAS.

The South Carolina demonstration, in contrast, was entirely based on employer participation. Although the program was considered a broad success, the demonstration carried a steep administrative cost associated with employer recruitment and customer service. Administrative costs amounted to 40 percent of total program costs. While we would not expect such high administrative costs were the program to be administered on a statewide basis following the demonstration, the SCHAP experience nevertheless demonstrates the costliness of intensive employer outreach, eligibility determination, and program monitoring.

A key concern about coordinating employer-based and other coverage is the broader generosity of traditional Medicaid benefits. In the case of MHP, the State paid for services not covered under the private benefit package, thus increasing the administrative complexity of the subsidy program. In the future, it may be neither administratively reasonable, nor fiscally prudent, for a State to augment private coverage with more generous Medicaid benefits.

Lesson 10: Employers Were Willing to Participate in a Medicaid Expansion Program

The underpinning of the South Carolina demonstration was the provision of employer-based health insurance coverage to small businesses with a preponderance of low-income workers. The program seems to have attracted a disproportionate share of family businesses, which joined for "peace of mind."

Employers who participated in SCHAP were very positive about their experience. They were strongly committed to the success of the program and wanted very much to see it continue indefinitely. They were very satisfied with the benefits, costs, and administrative aspects of SCHAP. The level of satisfaction is not surprising because of the way in which SCHAP was designed. Its premiums were much less expensive than competing premiums because they were heavily subsidized by the Federal grant. They received the Medicaid benefit package, which is quite comprehensive compared to benefits typically offered in the small group market (which are often quite limited to keep the premium low).

The level of administrative service provided by SCHAP staff was exceptional; the ratio of firms to SCHAP staff was quite low. It would be a challenge to provide the same high level of service in a program that was large enough to lower average fixed costs sufficiently to compete in the private market. However, SCHAP was designed as a public program to serve a population that is not served well by the private market, so that high administrative costs relative to commercial plans which screen their risks may be justifiable.

There was one source of dissatisfaction with SCHAP – the narrow eligibility criteria for employers and their employees. SCHAP demonstrated the inequity of covering low-income employees within a business, but not covering a firm's higher-income employees.

This made the program less attractive to employers who were unwilling to offer a more generous benefit to their low-wage workers. Provision must be made for covering workers who do not meet the stringent low-income threshold required for subsidized coverage. Based on the SCHAP experience, less restrictive eligibility criteria would be expected to increase participation, decrease administrative overhead, and improve acceptance among the general population of employers. One caveat, however, is that subsidy programs are costly and typically generate relatively low enrollments, especially if they are of a temporary duration (USGAO, 1992).

10.3 Phase-Down of the Demonstration

The Medicaid Expansion Demonstration has ended and the effects seem to have been short-lived. In South Carolina and Maine, most of the demonstration participants returned to being uninsured. Most of the enrollees in the Washington demonstration transferred to the Basic Health Plan, which was already in place at the time HAS began.

MHP was terminated prematurely in March 1995, due to a lack of political will to continue the program. Two-thirds of the MHP enrollees became uninsured, and another 11 percent obtained Medicaid coverage. About 20 percent obtained private insurance coverage following disenrollment from MHP. MHP, therefore, provided short-term coverage for the uninsured; long-term solutions are still required.

SCHAP was extended one year beyond the original demonstration through additional Federal waivers, but ultimately ended in January of 1997. Although the local Health Access Board and employers had attempted to develop a small business purchasing pool to take the

place of SCHAP, that never came to pass. The Institute on Poverty and Deprivation, which had provided administrative support to the Health Access Board, discontinued operations in mid-1996 due to lack of funding. Additionally, the Health Access Board experienced discontinuities in leadership in late-1996 and it too disbanded. The business community in Horry and Marion counties was unable to form an association to purchase health insurance, although they were only 50 employees short of the minimum purchasing pool size of 1,000 employees.

When HAS ended in March 1996, most members joined the Basic Health Plan (BHP), a state-subsidized health insurance program, which pre-dated HAS. The State estimates 93 percent of HAS participants transferred to BHP. It would appear that most participants from the HAS demonstration made a successful transition to another form of insurance coverage. It is unknown, however, how long HAS members will remain enrolled in BHP. HAS had no premiums or copayments, while BHP has both; BHP premiums range from $10 to $30 per month. Apparently, HAS members who did not select a BHP managed care plan were randomly assigned to the more expensive plans.

The experience of the Medicaid Expansion Demonstration suggests that it is difficult to sustain experimental programs due to budgetary and political constraints. With the exception of Washington State, which already had the Basic Health Plan in place at the time HAS began, neither of the other two programs has led to lasting reform.

10.4 Concluding Remarks

The Medicaid Expansion Demonstration has taught us valuable lessons about the promises and challenges of creating health insurance programs for low-income people who are uninsured. This evaluation is extremely timely in light of the recent and ongoing decline in private insurance coverage (USGAO, 1997).

Perhaps the most significant lesson of the Medicaid Expansion Demonstration is that the achievement of enrollment targets is not guaranteed, even if the program is free and eligibility criteria are generous. Marketing and outreach are required, and this can be an expensive and labor-intensive effort, as SCHAP has demonstrated. When multiple stakeholders are involved, as was the case with HAS, differences in the "cultures" of administering agencies can limit the commitment to marketing, and hence, the very viability of the program. Similarly, Maine's fiscal uncertainty served to dampen enthusiasm for the program and minimized the success of open enrollment.

Nevertheless, the results clearly have shown that demonstration enrollees were better off when they were enrolled in the program than after they lost coverage, due to disenrollment (as evidenced in South Carolina) or because the program ended (as we saw in Maine). We conclude that the Medicaid Expansion Demonstration served to eliminate financial barriers to care, and thereby reduced levels of unmet need. This was achieved largely by improving access to ambulatory care, especially in non-hospital-based settings.

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Appendix A

Appendix Table 5-1
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Number of Physician Office Visits	Number of Outpatient Visits	Number of Emergency Room Visits
Intercept	-0.109329 ***	-0.141033 ***	0.205379 ***
	(0.02524)	(0.01841)	(0.01137)
Federal Waiver Status	-0.088753 ***	-0.060558 ***	-0.00864 **
	(0.00965)	(0.00703)	(0.00434)
Open Enrollment	-0.015638 *	-0.008841	-0.002654
	(0.00835)	(0.00609)	(0.00376)
Enrollment through Review of Medicaid Denials	-0.026543 ***	-0.02539 ***	-0.005781
	(0.00782)	(0.00571)	(0.00352)
Hospital Payments Reduced by Half	-0.0283 ***	-0.024199 ***	0.010416 ***
	(0.00838)	(0.00611)	(0.00377)
Hospital Payments Eliminated	-0.157689 ***	-0.095076 ***	0.006457
	(0.01258)	(0.00917)	(0.00566)
Months Continuously Eligible	-0.000536 **	-0.000818 ***	-0.00007
	(0.00021)	(0.00015)	(0.00010)
Reciprocal of Months Continuously Eligible	-0.15413 ***	-0.072122 ***	-0.016959 ***
	(0.01279)	(0.00933)	(0.00576)
Multiple Enrollment Segments	0.017326 ***	-0.005098 *	0.007051 ***
	(0.00422)	(0.00308)	(0.00190)
Female	0.123347 ***	0.075597 ***	-0.001645
	(0.00405)	(0.00295)	(0.00182)
Age	0.007618 ***	0.005695 ***	-0.005008 ***
	(0.00115)	(0.00084)	(0.00052)
Age-Squared	-0.00006 ***	-0.00005 ***	0.00004 ***
	(0.00001)	(0.00001)	(0.00001)
Physician to Population Ratio	0.34371 ***	0.33317 ***	0.130584 ***
	(0.02480)	(0.01809)	(0.01117)
Elapsed Time	0.006711 ***	0.005137 ***	-0.000317
	(0.00062)	(0.00045)	(0.00028)
R-Squared	**0.0154**	**0.0118**	**0.0065**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Number of Primary Care Physician Visits	Number of Specialty Care Visits	Number of Hospital Admissions
Intercept	0.017416	-0.102192 ***	-0.001924
	(0.01539)	(0.01655)	(0.00322)
Federal Waiver Status	-0.035521 ***	-0.03759 ***	-0.000852
	(0.00588)	(0.00632)	(0.00123)
Open Enrollment	-0.003216	-0.015026 ***	-0.003266 ***
	(0.00509)	(0.00548)	(0.00107)
Enrollment through Review of Medicaid Denials	-0.015254 ***	-0.011766 **	-0.000691
	(0.00477)	(0.00513)	(0.00100)
Hospital Payments Reduced by Half	-0.011542 **	-0.016748 ***	-0.000884
	(0.00511)	(0.00549)	(0.00107)
Hospital Payments Eliminated	-0.058218 ***	-0.073484 ***	-0.005243 ***
	(0.00767)	(0.00824)	(0.00161)
Months Continuously Eligible	-0.000338 ***	-0.000117	-0.00006 **
	(0.00013)	(0.00014)	(0.00003)
Reciprocal of Months Continuously Eligible	-0.0706 ***	-0.065323 ***	0.009263 ***
	(0.00779)	(0.00838)	(0.00163)
Multiple Enrollment Segments	0.013869 ***	0.008694 ***	-0.000504
	(0.00257)	(0.00276)	(0.00054)
Female	0.055759 ***	0.043588 ***	-0.001164 **
	(0.00247)	(0.00266)	(0.00052)
Age	-0.00031	0.005707 ***	8.0773E-05
	(0.00070)	(0.00076)	(0.00015)
Age-Squared	0.00002 ***	-0.00006 ***	0.00000
	(0.00001)	(0.00001)	(0.00000)
Physician to Population Ratio	0.035444 **	0.241458 ***	0.025267 ***
	(0.01512)	(0.01625)	(0.00317)
Elapsed Time	0.002775 ***	0.003285 ***	0.000169 **
	(0.00038)	(0.00040)	(0.00008)
R-Squared	**0.0090**	**0.0067**	**0.0018**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Total Costs	Log of Inpatient Costs	Log of Inpatient Facility Costs
Intercept	0.321546 ***	0.026229	0.024678
	(0.07496)	(0.02610)	(0.02257)
Federal Waiver Status	-0.21374 ***	-0.001137	0.011105
	(0.02864)	(0.00997)	(0.00862)
Open Enrollment	-0.018897	-0.026161 ***	-0.019308 ***
	(0.02481)	(0.00864)	(0.00747)
Enrollment through Review of Medicaid Denials	-0.120736 ***	-0.005847	-0.003874
	(0.02323)	(0.00809)	(0.00699)
Hospital Payments Reduced by Half	-0.093647 ***	-0.002032	0.002905
	(0.02488)	(0.00866)	(0.00749)
Hospital Payments Eliminated	-0.688401 ***	-0.051517 ***	-0.056408 ***
	(0.03735)	(0.01301)	(0.01124)
Months Continuously Eligible	-0.003385 ***	-0.000696 ***	-0.000265
	(0.00063)	(0.00022)	(0.00019)
Reciprocal of Months Continuously Eligible	-0.618882 ***	0.068505 ***	0.075002 ***
	(0.03798)	(0.01322)	(0.01143)
Multiple Enrollment Segments	0.005028	-0.00628	-0.00293
	(0.01252)	(0.00436)	(0.00377)
Female	0.51077 ***	-0.005033	-0.010183 ***
	(0.01203)	(0.00419)	(0.00362)
Age	0.023532 ***	-0.000489	0.00009
	(0.00343)	(0.00119)	(0.00103)
Age-Squared	-0.000248 ***	0.00002	0.00001
	(0.00004)	(0.00001)	(0.00001)
Physician to Population Ratio	1.738782 ***	0.25142 ***	0.175279 ***
	(0.07364)	(0.02564)	(0.02217)
Elapsed Time	0.020732 ***	0.000965	-0.000151
	(0.00183)	(0.00064)	(0.00055) ***
R-Squared	**0.0276**	**0.0025**	**0.0036**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Inpatient Professional Costs	Log of Emergency Room Costs	Log of Outpatient Costs
Intercept	0.014596	0.708128 ***	0.068747
	(0.01960)	(0.03298)	(0.04695)
Federal Waiver Status	-0.005154	0.054128 ***	-0.018368
	(0.00749)	(0.01260)	(0.01794)
Open Enrollment	-0.018582 ***	-0.001909	-0.033241 **
	(0.00649)	(0.01092)	(0.01554)
Enrollment through Review of Medicaid Denials	-0.003619	-0.005659	-0.036225 **
	(0.00607)	(0.01022)	(0.01455)
Hospital Payments Reduced by Half	-0.002729	0.04627 ***	-0.030934 **
	(0.00650)	(0.01095)	(0.01558)
Hospital Payments Eliminated	-0.030547 ***	-0.116175 ***	-0.410235 ***
	(0.00977)	(0.01643)	(0.02339)
Months Continuously Eligible	-0.000603 ***	-0.00008	-0.002551 ***
	(0.00016)	(0.00028)	(0.00039)
Reciprocal of Months Continuously Eligible	0.034031 ***	-0.046038 ***	-0.243595 ***
	(0.00993)	(0.01671)	(0.02379)
Multiple Enrollment Segments	-0.00372 ***	0.017408 ***	0.003495
	(0.00327)	(0.00551)	(0.00784)
Female	-0.002237	-0.006143	0.166939 ***
	(0.00315)	(0.00529)	(0.00754)
Age	-0.000469	-0.013169 ***	0.007723 ***
	(0.00090)	(0.00151)	(0.00215)
Age-Squared	0.00002 *	0.000101 ***	-0.00004 *
	(0.00001)	(0.00002)	(0.00003)
Physician to Population Ratio	0.173721 ***	0.367308 ***	0.863839 ***
	(0.01926)	(0.03240)	(0.04612)
Elapsed Time	0.001032 **	-0.006272 ***	0.005705 ***
	(0.00048)	(0.00081)	(0.00115)
R-Squared	**0.0018**	**0.0182**	**0.0195**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Office Visit Costs	Log of Physician Service Costs	Log of Primary Care Physician Costs
Intercept	-0.091588	0.04394	0.077505 **
	(0.06064)	(0.05575)	(0.03784)
Federal Waiver Status	-0.254826 ***	-0.23079 ***	-0.098737 ***
	(0.02317)	(0.02130)	(0.01446)
Open Enrollment	0.027999	-0.074408 ***	-0.012695
	(0.02007)	(0.01845)	(0.01252)
Enrollment through Review of Medicaid Denials	-0.090265 ***	-0.081544 ***	-0.043365 ***
	(0.01879)	(0.01728)	(0.01173)
Hospital Payments Reduced by Half	-0.090835 ***	-0.075469 ***	-0.0218 *
	(0.02012)	(0.01850)	(0.01256)
Hospital Payments Eliminated	-0.418631 ***	-0.354636 ***	-0.14918 ***
	(0.03022)	(0.02778)	(0.01885)
Months Continuously Eligible	-0.001618 ***	-0.002204 ***	-0.000965 ***
	(0.00051)	(0.00047)	(0.00032)
Reciprocal of Months Continuously Eligible	-0.565932 ***	-0.384329 ***	-0.175875 ***
	(0.03072)	(0.02824)	(0.01917)
Multiple Enrollment Segments	0.014352	0.018352 **	0.030706 ***
	(0.01013)	(0.00931)	(0.00632)
Female	0.473638 ***	0.324716 ***	0.153508 ***
	(0.00973)	(0.00895)	(0.00607)
Age	0.024514 ***	0.011743 ***	-0.000825
	(0.00277)	(0.00255)	(0.00173)
Age-Squared	-0.000253 ***	0.00005	0.00008 ***
	(0.00003)	(0.00003)	(0.00002)
Physician to Population Ratio	0.522225 ***	0.767198 ***	0.138414 ***
	(0.05957)	(0.05477)	(0.03717)
Elapsed Time	0.021704 ***	0.016336 ***	0.007319 ***
	(0.00148)	(0.00136)	(0.00092)
R-Squared	**0.0262**	**0.0208**	**0.0128**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHIP Enrollees

Variable	Log of Specialty Care Costs	Log of Other Professional Costs	Log of Medical Care Costs
Intercept	-0.076248 (0.04682)	-0.136775 *** (0.04554)	-0.226006 *** (0.04222)
Federal Waiver Status	-0.159041 *** (0.01789)	-0.103715 *** (0.01740)	-0.101713 *** (0.01613)
Open Enrollment	-0.076318 *** (0.01550)	0.08028 *** (0.01507)	0.016884 (0.01397)
Enrollment through Review of Medicaid Denials	-0.056998 *** (0.01451)	-0.033447 ** (0.01411)	-0.046748 *** (0.01308)
Hospital Payments Reduced by Half	-0.067981 *** (0.01554)	-0.044769 *** (0.01511)	-0.032818 ** (0.01401)
Hospital Payments Eliminated	-0.249504 *** (0.02333)	-0.184397 *** (0.02269)	-0.220999 *** (0.02104)
Months Continuously Eligible	-0.001641 *** (0.00039)	-0.000351 (0.00038)	-0.00073 ** (0.00035)
Reciprocal of Months Continuously Eligible	-0.21746 *** (0.02372)	-0.269977 *** (0.02307)	-0.162395 *** (0.02139)
Multiple Enrollment Segments	-0.005318 (0.00782)	-0.011909 (0.00761)	-0.002313 (0.00705)
Female	0.195758 *** (0.00751)	0.224146 *** (0.00731)	0.157355 *** (0.00678)
Age	0.013147 *** (0.00214)	0.020209 *** (0.00208)	0.013968 *** (0.00193)
Age-Squared	-0.000116 *** (0.00003)	-0.000299 *** (0.00003)	-0.000107 *** (0.00002)
Physician to Population Ratio	0.746614 *** (0.04600)	0.078877 * (0.04474)	-0.02961 (0.04148)
Elapsed Time	0.011011 *** (0.00114)	0.010405 *** (0.00111)	0.012254 *** (0.00103)
R-Squared	**0.0115**	**0.0111**	**0.0102**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Surgery Costs	Log of Ancillary Costs	Log of Mental Health/ Substance Abuse Costs
Intercept	-0.019484 (0.04870)	0.059427 * (0.03354)	-0.130632 *** (0.02696)
Federal Waiver Status	-0.165467 *** (0.01861)	-0.080756 *** (0.01281)	-0.03167 *** (0.01030)
Open Enrollment	-0.055512 *** (0.01612)	-0.017002 (0.01110)	0.005653 (0.00892)
Enrollment through Review of Medicaid Denials	-0.058139 *** (0.01509)	-0.027388 *** (0.01039)	-0.003557 (0.00835)
Hospital Payments Reduced by Half	-0.060375 *** (0.01616)	-0.024446 ** (0.01113)	-0.003158 (0.00895)
Hospital Payments Eliminated	-0.298705 *** (0.02427)	-0.159439 *** (0.01671)	-0.066197 *** (0.01343)
Months Continuously Eligible	-0.001647 *** (0.00041)	-0.000793 *** (0.00028)	-0.000185 (0.00023)
Reciprocal of Months Continuously Eligible	-0.325181 *** (0.02467)	-0.120088 *** (0.01699)	-0.094843 *** (0.01366)
Multiple Enrollment Segments	0.032267 *** (0.00814)	0.017329 *** (0.00560)	-0.025582 *** (0.00450)
Female	0.259491 *** (0.00782)	0.184388 *** (0.00538)	0.046743 *** (0.00433)
Age	0.00853 *** (0.00223)	-0.001373 (0.00153)	0.014202 *** (0.00123)
Age-Squared	0.00002 (0.00003)	0.00006 *** (0.00002)	-0.00021 *** (0.00001)
Physician to Population Ratio	0.672339 *** (0.04784)	0.216793 *** (0.03295)	0.473324 *** (0.02648)
Elapsed Time	0.013735 *** (0.00119)	0.006984 *** (0.00082)	0.001126 * (0.00066)
R-Squared	**0.0181**	**0.0147**	**0.0076**

Appendix Table 6-1

Logistic Regression of Utilization Among SCHAP Adult Enrollees

Variable	Probability of a Hospitalization	Probability of an Ambulatory Visit	Probability of an ER Visit
Intercept	-6.5467 ***	-1.2246 ***	-4.5285 ***
	(1.355)	(0.334)	(0.679)
Age	0.1056	0.0515 ***	0.1376 ***
	(0.064)	(0.017)	(0.036)
Age-Squared	-0.00082	-0.00039 *	-0.00212 ***
	(0.001)	(0.000)	(0.000)
Male	-0.4796 **	-0.7402 ***	-0.164
	(0.200)	(0.056)	(0.103)
White	0.3054	0.4219 ***	0.0744
	(0.240)	(0.066)	(0.122)
Above FPL	0.2707	-0.0496	-0.0274
	(0.226)	(0.061)	(0.112)
Horry County	-0.7326 ***	0.0307	-0.0838
(Marion and Other Counties omitted)	(0.221)	(0.074)	(0.136)
Year (1993 omitted)			
1994	-0.2794	0.2236 **	0.558 ***
	(0.313)	(0.094)	(0.192)
1995	-0.1966	0.417 ***	0.5965 ***
	(0.344)	(0.103)	(0.205)
Season (Winter omitted)			
(Winter Omitted)			
Spring	0.6937	-0.1096	0.0137
	(0.430)	(0.127)	(0.232)
Summer	-0.1538	-0.0958	0.0846
	(0.370)	(0.100)	(0.182)
Fall	0.3238	-0.1001	-0.1309
	(0.407)	(0.115)	(0.216)
Quarter	0.1946	-0.1459 ***	-0.1599 **
	(0.168)	(0.044)	(0.082)
Quarter-Squared	-0.0278	0.00732	0.0089
	(0.019)	(0.005)	(0.009)
n	**5620**	**5620**	**5620**
-2 Log Likelihood	**1045.02**	**7433.47**	**2953.86**
Chi-square	**46.022** ***	**332.6** ***	**57.859** ***

Appendix Table 6-1 (continued)

Logistic Regression of Utilization Among SCHAP Adult Enrollees

Variable	Probability of a Physician Visit	Probability of a Primary Care Visit	Probability of a Specialist Visit
Intercept	-1.3911 ***	-1.7702 ***	-3.3918 ***
	(0.339)	(0.354)	(0.495)
Age	0.0544 ***	0.0525 ***	0.0708 ***
	(0.017)	(0.018)	(0.024)
Age-Squared	-0.00041 *	-0.00046 **	-0.00055 *
	(0.000)	(0.000)	(0.000)
Male	-0.7809 ***	-0.7583 ***	-0.5554 ***
	(0.056)	(0.058)	(0.079)
White	0.4337 ***	0.3999 ***	0.3835 ***
	(0.067)	(0.070)	(0.095)
Above FPL	-0.052	-0.081	-0.0595
	(0.061)	(0.063)	(0.084)
Horry County	0.0511	0.504 ***	-0.5803 ***
(Marion and Other Counties omitted)	(0.075)	(0.082)	(0.095)
Year (1993 omitted)			
1994	0.1947 **	0.2682 ***	0.0732
	(0.095)	(0.097)	(0.135)
1995	0.3922 ***	0.3919 ***	0.3003 **
	(0.104)	(0.106)	(0.145)
Season (Winter omitted) (Winter Omitted)			
Spring	-0.1786	-0.2346 *	0.31 *
	(0.129)	(0.132)	(0.180)
Summer	-0.1473	-0.1992 *	0.2609 *
	(0.101)	(0.103)	(0.142)
Fall	-0.1214	-0.2105 *	0.2712 *
	(0.116)	(0.119)	(0.165)
Quarter	-0.1419 ***	-0.1714 ***	-0.0313
	(0.045)	(0.046)	(0.061)
Quarter-Squared	0.00604	0.0067	-0.00026
	(0.005)	(0.005)	(0.006)
n	**5620**	**5620**	**5620**
-2 Log Likelihood	**7325.1**	**7002.11**	**4548.09**
Chi-square	**363.33** ***	**380.322**	**168.328** ***

Appendix Table 6-2

Logistic Regression of Utilization Among SCHAP, AFDC, and Disabled Adults

Variable	Probability of a Hospitalization	Probability of an Ambulatory Visit	Probability of an ER Visit
Intercept	-5.6897 ***	-0.7295 ***	-3.0984 ***
	(0.502)	(0.186)	(0.280)
Age	0.0914 ***	0.0256 ***	0.0602 ***
	(0.023)	(0.009)	(0.013)
Age-Squared	-0.00086 ***	-0.00013	-0.00097 ***
	(0.000)	(0.000)	(0.000)
Male	0.0716	-0.5315 ***	-0.3007 ***
	(0.077)	(0.035)	(0.055)
White	0.1871 **	0.0748 **	-0.00788
	(0.079)	(0.036)	(0.054)
Horry County	-0.3718 ***	-0.0456	-0.0914
(Marion and Other Counties omitted)	(0.086)	(0.042)	(0.062)
Group (SCHAP omitted)			
AFDC	0.7122 ***	0.2545 ***	0.8981 ***
	(0.152)	(0.051)	(0.076)
Disabled	1.431 ***	-0.0415	0.8184 ***
	(0.110)	(0.039)	(0.065)
Year (1993 omitted)			
1994	-0.1379	0.0209	0.0857
	(0.110)	(0.051)	(0.077)
1995	-0.1416	0.0242	0.06
	(0.117)	(0.055)	(0.082)
Season (Winter omitted)			
Spring	0.4078 **	0.0208	0.0843
	(0.161)	(0.073)	(0.108)
Summer	0.1317	-0.0526	0.0163
	(0.135)	(0.059)	(0.089)
Fall	0.0942	-0.0785	-0.0401
	(0.156)	(0.067)	(0.102)
Quarter	-0.088	0.0637 **	-0.0362
	(0.057)	(0.025)	(0.038)
Quarter-Squared	0.00279	-0.00693 ***	0.00261
	(0.006)	(0.003)	(0.004)
n	**15458**	**15458**	**15458**
-2 Log Likelihood	**5876**	**21004**	**11236**
Chi-square	**413.24** ***	**411.86** ***	**348.55** ***

Appendix Table 6-2 (continued)

Logistic Regression of Utilization Among SCHAP, AFDC, and Disabled Adults

Variable	Probability of a Physician Visit	Probability of a Primary Care Visit	Probability of a Specialist Visit
Intercept	(0.218)	-1.3864 ***	-1.658 ***
	0.0417 ***	(0.194)	(0.210)
Age	(0.010)	0.0467 ***	0.0443 ***
	-0.00048 ***	(0.009)	(0.010)
Age-Squared	(0.000)	-0.00031 ***	-0.00026 **
	-0.3553 ***	(0.000)	(0.000)
Male	(0.041)	-0.5867 ***	-0.6031 ***
	0.0622	(0.036)	(0.038)
White	(0.041)	0.0766 **	0.00509
	-0.0492	(0.037)	(0.039)
Horry County	(0.048)	-0.0884 **	0.0877 *
(Marion and Other Counties omitted)		(0.042)	(0.046)
Group (SCHAP omitted)			
AFDC	0.8497 ***	-0.2275 ***	-0.5957 ***
	(0.059)	(0.053)	(0.057)
Disabled	0.6293 ***	-0.3193 ***	-0.5 ***
	(0.048)	(0.040)	(0.043)
Year (1993 omitted)			
1994	0.0543	0.0265	0.0912
	(0.059)	(0.053)	(0.057)
1995	-0.0162	0.0565	0.1705 ***
	(0.063)	(0.057)	(0.061)
Season (Winter omitted)			
Spring	(0.084)	-0.1319 *	-0.2534 ***
	0.0865	(0.075)	(0.080)
Summer	(0.068)	-0.1266 **	-0.1887 ***
	-0.00597	(0.060)	(0.064)
Fall	(0.078)	-0.1244 *	-0.18 **
		(0.069)	(0.073)
Quarter	-0.0173	0.1154 ***	0.0739 ***
	(0.029)	(0.026)	(0.027)
Quarter-Squared	0.000685	-0.0108 ***	-0.00836 ***
	(0.003)	(0.003)	(0.003)
n	**15458**	**15458**	**15458**
-2 Log Likelihood	**16878**	**20273**	**18466**
Chi-square	**440.01** ***	**570.86** ***	**662.6** ***

Appendix Table 8-1

Determinants of Access in Maine (MHP): Impact of Program Termination

	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Variable								
Intercept	0.94	-1.41	-1.71	-2.36 **	-1.2	0.76	0.34	0.84
	(1.52)	(1.01)	(1.19)	(1.17)	(0.97)	(1.13)	(1.19)	(1.78)
Age	0.01	-0.01	0	-0.01	0	0.04 **	0	0.02
	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)
Gender (1=Male)	0.26	-0.54 *	-0.17	0.05	-0.35	0.52	-0.52	-0.07
	(0.46)	(0.32)	(0.35)	(0.34)	(0.31)	(0.32)	(0.37)	(0.38)
Race (1=White)	1.18 *	-0.65	-0.99 *	0.59	-0.04	-0.32	0.63	0.43
	(0.68)	(0.66)	(0.59)	(0.81)	(0.64)	(0.70)	(0.81)	(0.94)
Education (1=High School Graduate or Higher)	0.67	1.33 ***	0.03	-0.5	0.83 **	0.72 *	-0.32	0.36
	(0.43)	(0.45)	(0.43)	(0.33)	(0.39)	(0.38)	(0.47)	(0.39)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	1.02	0.04	0.34	0.15	-0.68	0.16	0.18	0.67
	(0.73)	(0.42)	(0.42)	(0.44)	(0.44)	(0.42)	(0.49)	(0.48)
Part-time	-0.26	0.47	0.02	0.4	0.2	0.46	0.15	0.65
	(0.46)	(0.35)	(0.40)	(0.37)	(0.33)	(0.34)	(0.47)	(0.45)
Not working (omitted)								

Appendix Table 8-1 (continued)

Determinants of Access in Maine (MHP): Impact of Program Termination

Variable	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Self-Reported Health Status								
Very Good	-0.06	-0.52	0.68	0.97	-0.42	-1.63 ***	0.66	-0.25
	(0.75)	(0.43)	(0.67)	(0.78)	(0.42)	(0.58)	(0.66)	(0.72)
Good	0.58	-0.75 *	0.99	1.3 *	-0.8 *	-1.26 **	-0.37	-0.85
	(0.73)	(0.45)	(0.63)	(0.72)	(0.44)	(0.58)	(0.61)	(0.74)
Fair/Poor	-0.02	0.27	1.41 **	1.59 **	-0.24	-1.24 **	0.1	0.31
	(0.78)	(0.51)	(0.69)	(0.76)	(0.50)	(0.63)	(0.66)	(0.78)
Excellent (omitted)								
Physical health interferes with social activities	-0.01	0.53	-0.78 **	0.02	0.3	0.49	0.83 *	0.21
	(0.60)	(0.39)	(0.38)	(0.40)	(0.37)	(0.39)	(0.45)	(0.43)
Mental health interferes with social activities	-0.41	0.46	0.49	-0.37	0.2	-0.01	0.55	0.42
	(0.50)	(0.39)	(0.41)	(0.40)	(0.36)	(0.31)	(0.41)	(0.42)
Health limits light activities	-0.62	-3.51 ***	-1.08 *	-0.04	-1.58 **	-0.47	0.19	-0.16
	(0.58)	(1.04)	(0.56)	(0.47)	(0.63)	(0.44)	(0.51)	(0.52)
Enrollees	-0.46	-1.11 ***	0.1	-0.44	-0.82 ***	-0.32	1.21 ***	-0.72 *
	(0.49)	(0.31)	(0.33)	(0.33)	(0.29)	(0.31)	(0.37)	(0.41)
R-square	**0.0449**	**0.1831**	**0.0453**	**0.0470**	**0.1063**	**0.0691**	**0.0903**	**0.0489**
n	**462**	**460**	**458**	**458**	**459**	**462**	**459**	**460**
chi-square	**17.02**	**73.36**	**20.12**	**20.68**	**46.23**	**35.16**	**38.47**	**21.04**

*p<0.10 **p<0.05 ***p<0.01

Appendix Table 8-2

Determinants of Satisfaction in Maine (MHP): Impact of Program Termination

	Satisfaction With							
Variable	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Intercept	3.08 ***	5.94 ***	3.27 **	2.8 ***	2.77 **	4.77 ***	3.25 ***	2.44 ***
	(1.08)	(1.36)	(1.28)	(1.08)	(1.12)	(1.20)	(0.95)	(0.91)
Age	-0.01	-0.03	-0.02	-0.01	-0.03 *	-0.03 **	-0.03 **	-0.03 ***
	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
Gender (1=Male)	0.25	-0.18	0.07	-0.19	0.62	-0.07	0.38	0.79 ***
	(0.31)	(0.38)	(0.32)	(0.30)	(0.39)	(0.36)	(0.29)	(0.27)
Race (1=White)	-0.67	-0.52	-0.28	-0.33	0.28	-0.83	0.04	0.15
	(0.66)	(0.83)	(0.83)	(0.60)	(0.56)	(0.77)	(0.60)	(0.50)
Education (1=High School Graduate or Higher)	0.02	-1.01	-0.01	-0.31	-0.36	-0.54	-0.89 **	-0.61 *
	(0.37)	(0.63)	(0.43)	(0.33)	(0.44)	(0.50)	(0.35)	(0.33)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	-0.08	-0.23	-0.25	0.03	-0.2	0.06	0.18	0.14
	(0.36)	(0.49)	(0.41)	(0.37)	(0.45)	(0.53)	(0.40)	(0.36)
Part-time	0.2	0.03	-0.52	0.02	-0.09	-0.56	0.58	0.63 **
	(0 35)	(0.48)	(0.41)	(0.35)	(0.40)	(0.40)	(0.35)	(0.31)
Not working (omitted)								

Appendix Table 8-2 (continued)

Determinants of Satisfaction in Maine (MHP): Impact of Program Termination

	Satisfaction With							
	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Variable								
Self-Reported Health Status								
Very Good	-0.62	0.6	0.3	0.63	0.58	1.11 **	-0.14	0.31
	(0.46)	(0.64)	(0.53)	(0.56)	(0.53)	(0.55)	(0.47)	(0.42)
Good	-0.33	0.16	0.58	-0.46	0.91 *	1.07 **	-0.02	0.5
	(0.48)	(0.58)	(0.54)	(0.54)	(0.51)	(0.53)	(0.46)	(0.42)
Fair/Poor	-0.35	-0.03	0.72	-0.12	1.49 ***	0.92 *	0.18	0.85 *
	(0.54)	(0.63)	(0.58)	(0.65)	(0.57)	(0.55)	(0.54)	(0.50)
Excellent (omitted)								
Physical health interferes with social activities	-0.04	-0.64	0.23	-0.39	-0.07	0.27	-0.28	-0.46
	(0.33)	(0.52)	(0.39)	(0.38)	(0.42)	(0.39)	(0.40)	(0.35)
Mental health interferes with social activities	0.45	0.42	-0.16	0.65 *	0.19	-0.03	0.52	0.27
	(0.32)	(0.48)	(0.40)	(0.36)	(0.40)	(0.43)	(0.34)	(0.32)
Health limits light activities	0.83	0.09	-0.28	-0.05	-0.3	-0.28	0.03	0.15
	(0.53)	(0.59)	(0.48)	(0.39)	(0.57)	(0.45)	(0.51)	(0.42)
Enrollees	-1.34 ***	-2.32 ***	-1.53 ***	-0.93 ***	-0.97 **	-1.21 ***	-0.9 ***	-1.34 ***
	(0.35)	(0.68)	(0.43)	(0.33)	(0.41)	(0.43)	(0.32)	(0.28)
R-square	**0.0683**	**0.1260**	**0.0767**	**0.0560**	**0.0453**	**0.0491**	**0.0545**	**0.1325**
n	**376**	**254**	**285**	**414**	**378**	**399**	**406**	**393**
chi-square	**30.36**	**32.19**	**25.20**	**27.11**	**21.22**	**22.14**	**27.75**	**60.30**

*p<0.10 **p<0.05 ***p<0.01

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Appendix Table 8-3

Determinants of Access in South Carolina (SCHAP): Impact of Disenrollment

Variable	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Intercept	-2.46 *** (0.18)	0.17 (0.29)	0.13 (0.20)	0.68 *** (0.25)	-0.13 (0.26)	0.15 (0.26)	-0.13 (0.18)	-0.24 (0.35)
Age	0.01 *** (0.00)	0 (0.00)	0 (0.00)	-0.01 ** (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Gender (1=Male)	0 (0.05)	0.12 (0.08)	-0.04 (0.06)	0.08 (0.07)	0.05 (0.08)	-0.02 (0.08)	0.1 (0.07)	-0.01 (0.08)
Race (1=White)	0.04 (0.05)	-0.33 *** (0.09)	-0.01 (0.06)	-0.18 ** (0.08)	-0.18 ** (0.09)	0.01 (0.09)	-0.08 (0.07)	0.03 (0.11)
Education (1=High School Graduate or Higher)	0.11 *** (0.04)	-0.03 (0.10)	-0.1 (0.09)	0.01 (0.11)	-0.11 (0.10)	-0.08 (0.10)	0.1 (0.09)	0.04 (0.12)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	0.09 (0.08)	-0.18 (0.14)	-0.03 (0.07)	-0.32 ** (0.13)	-0.11 (0.15)	-0.13 (0.14)	0.1 (0.09)	0.19 (0.16)
Part-time	0.07 (0.04)	0.05 (0.09)	-0.05 (0.06)	0.02 (0.07)	0.1 (0.08)	0.05 (0.09)	0.03 (0.07)	0.11 (0.09)
Not working (omitted)								

Appendix Table 8-3 (continued)

Determinants of Access in South Carolina (SCHAP): Impact of Disenrollment

Variable	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Self-Reported Health Status								
Very Good	0.14 ***	0.08	-0.01	-0.02	0.06	0.04	-0.05	0.09
	(0.04)	(0.11)	(0.06)	(0.08)	(0.10)	(0.10)	(0.07)	(0.10)
Good	0.25 ***	-0.03	0.02	-0.09	-0.04	0	-0.01	0.19
	(0.07)	(0.12)	(0.08)	(0.10)	(0.11)	(0.12)	(0.09)	(0.14)
Fair/Poor	0.24 **	0.02	0.01	-0.1	0.06	-0.09	-0.2	0.01
	(0.11)	(0.18)	(0.14)	(0.16)	(0.15)	(0.16)	(0.14)	(0.14)
Excellent (omitted)								
Physical health interferes with social activities	-0.04	0.31 **	0.01	0.03	0.33 ***	0.22 *	0.08	-0.3 **
	(0.08)	(0.12)	(0.11)	(0.11)	(0.12)	(0.13)	(0.11)	(0.13)
Mental health interferes with social activities	-0.03	-0.24	0	-0.05	-0.26 *	-0.04	-0.17	0.04
	(0.07)	(0.14)	(0.13)	(0.13)	(0.15)	(0.14)	(0.11)	(0.14)
Health limits light activities	-0.01	0.25	-0.75 ***	0.57 **	0.35 **	0.52 **	0.57 **	-0.23
	(0.26)	(0.19)	(0.20)	(0.23)	(0.15)	(0.24)	(0.25)	(0.36)
Continuously enrolled	-0.07	0.21 **	-0.07	0.01	0.19 **	0.1	-0.22 ***	0.18 **
	(0.06)	(0.10)	(0.06)	(0.08)	(0.09)	(0.09)	(0.08)	(0.09)
R-square	**0.1719**	**0.1269**	**0.0937**	**0.0981**	**0.0900**	**0.0459**	**0.1064**	**0.0633**
n	**223**	**221**	**222**	**221**	**221**	**222**	**221**	**222**
chi-square								

*p<0.10 **p<0.05 ***p<0.01

SOURCE: Medicaid Expansion Demonstration Household Survey.

Appendix Table 8-4

Determinants of Satisfaction in South Carolina (SCHAP): Impact of Disenrollment

	Satisfaction With							
	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Variable								
Intercept	0.34	-0.01	0.6 *	0.18	0.16	0.49 *	0.49 *	0.19
	(0.32)	(0.38)	(0.35)	(0.31)	(0.27)	(0.26)	(0.28)	(0.25)
Age	0	0	-0.01 **	0	0	0	0	0
	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Gender (1=Male)	-0.11	0.16	0.01	0.07	0.1	-0.03	-0.01	0.09
	(0.09)	(0.12)	(0.10)	(0.10)	(0.09)	(0.09)	(0.08)	(0.08)
Race (1=White)	-0.17	-0.35 ***	-0.23 **	-0.06	-0.04	-0.32 ***	-0.16	0.08
	(0.11)	(0.12)	(0.11)	(0.10)	(0.11)	(0.10)	(0.10)	(0.09)
Education (1=High School Graduate or Higher)	-0.18 *	0.04	0	-0.09	-0.26 ***	-0.17 **	-0.17	-0.17
	(0.11)	(0.13)	(0.13)	(0.12)	(0.10)	(0.08)	(0.11)	(0.11)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	0.04	0.02	-0.15	-0.09	-0.07	-0.14	-0.1	-0.14
	(0.16)	(0.17)	(0.19)	(0.18)	(0.15)	(0.12)	(0.13)	(0.14)
Part-time	0.08	-0.01	0.07	-0.01	0.08	0.11	0.1	0.17 *
	(0.09)	(0.12)	(0.10)	(0.10)	(0.09)	(0.10)	(0.08)	(0.09)
Not working (omitted)								

Appendix Table 8-4 (continued)

Determinants of Satisfaction in South Carolina (SCHAP): Impact of Disenrollment

	Satisfaction With							
Variable	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Self-Reported Health Status								
Very Good	-0.05	-0.12	0.08	-0.03	-0.1	0.14	-0.01	-0.01
	(0.11)	(0.15)	(0.12)	(0.11)	(0.12)	(0.12)	(0.10)	(0.10)
Good	-0.18	-0.35 **	0.08	0.01	-0.05	-0.05	-0.28 **	-0.05
	(0.13)	(0.16)	(0.14)	(0.13)	(0.13)	(0.12)	(0.12)	(0.11)
Fair/Poor	-0.23	-0.14	0.13	0.31 *	0.31 **	-0.06	-0.21	-0.21
Excellent (omitted)								
Physical health interferes with social activities	-0.04	-0.15	-0.29 **	0.04	-0.01	-0.05	-0.24 *	-0.27 **
	(0.14)	(0.19)	(0.13)	(0.14)	(0.15)	(0.14)	(0.13)	(0.13)
Mental health interferes with social activities	-0.09	0.18	0.02	-0.03	-0.04	-0.05	0.09	-0.04
	(0.15)	(0.18)	(0.12)	(0.14)	(0.15)	(0.14)	(0.15)	(0.16)
Health limits light activities	0.69 **	0.63 **	-0.32	-0.19	0.03	0.03	0	0.37
	(0.33)	(0.25)	(0.22)	(0.22)	(0.15)	(0.16)	(0.16)	(0.23)
Continuously Enrolled	-0.01	-0.02	0.29 **	-0.01	0.02	-0.04	0.02	0.41 ***
	(0.11)	(0.13)	(0.11)	(0.11)	(0.11)	(0.10)	(0.10)	(0.09)
R-square	**0.0740**	**0.1921**	**0.1568**	**0.0345**	**0.0942**	**0.0860**		
n	**193**	**92**	**121**	**198**	**172**	**181**		
chi-square								

*p<0.10 **p<0.05 ***p<0.01

SOURCE: Medicaid Expansion Demonstration Household Survey.

10

Implications of the Medicaid Expansion Demonstration

This chapter summarizes and synthesizes the results of the evaluation of the Medicaid Expansion Demonstration. The demonstration funded three programs:

- The Maine Health Program (MHP), a statewide non-categorical, poverty-level Medicaid expansion for adults in Maine.
- The South Carolina Health Access Plan (SCHAP), an employer-based program for low-income workers and their dependents in Horry and Marion Counties, South Carolina; and
- Health Access Spokane (HAS), a program for low-income individuals and families in Spokane County, Washington.

We focus on implications of the Medicaid Expansion Demonstration with respect to program administration, enrollment impacts, utilization and costs, access and satisfaction, and employer participation.

We begin with an overview of the key accomplishments of the demonstration, followed by a discussion of the phase-down experience, and conclude with a summary of "lessons learned."

10.1 Key Accomplishments of the Medicaid Expansion Demonstration

Before proceeding with lessons learned from the demonstration, we would like to highlight three key accomplishments of the Medicaid Expansion Demonstration. First, the

Medicaid Expansion Demonstration enrolled 13,610 people across the three sites. Most of the participants were uninsured at the time they joined the demonstration (or they were shifted from State-funded programs for the uninsured).

Second, there can be no question that access to care was improved by the demonstration. However, measurement of access "impacts" is complex in a non-experimental design (i.e., in the absence of randomization). Unfortunately, our study could not model the impact of *obtaining* insurance coverage, due to lack of a baseline non-enrolled population that could be followed after the demonstration was implemented. Instead, we conducted longitudinal analyses showing the impact of the *loss* of insurance coverage on access and satisfaction. The likelihood of obtaining ambulatory care, especially in a non-hospital-based setting, declined after coverage was terminated. For example, upon disenrollment from SCHAP, the likelihood of a visit in the past three months declined from 60 percent to 39 percent. Concurrently, the likelihood of experiencing unmet need substantially increased (from 18 percent to 32 percent). Satisfaction with the cost of medical care dropped precipitously, following termination of coverage. Whereas 51 percent were very satisfied with medical care costs during SCHAP, only 10 percent were very satisfied after SCHAP. Similar impacts were observed in Maine, after the demonstration ended. Thus, we conclude that the demonstration improved access to care by eliminating financial barriers to care.

The third key accomplishment of the Medicaid Expansion Demonstration was the involvement of employers in the South Carolina program. SCHAP successfully enrolled eligible employees and dependents of eligible employers and provided a scaled-back package of Medicaid benefits. The program was extremely well received by employers.

10.2 Lessons Learned from the Medicaid Expansion Demonstration

Lesson 1: Administrative Complexity Should Not Be Underestimated

The three demonstration programs were more complex to administer than might have been anticipated. The three programs utilized different approaches, including piggybacking on the traditional Medicaid program in Maine, coordinating between two existing agencies in Washington, and establishing an entirely new field operation in South Carolina.

MHP built upon the existing Medicaid infrastructure and was viewed simply as another category of Medicaid eligibility. One might have expected a smooth implementation and operation as a result. However, the State encountered legislative resistance which placed the future of MHP in jeopardy, year after year, and hence distracted program staff from developing any innovations within the program. For example, Maine had planned to implement a primary care case management (PCCM) program as part of MHP to control utilization and minimize program costs. A pilot PCCM program was implemented for both Medicaid and MHP beneficiaries in two counties only a few months before MHP was terminated.

South Carolina devoted considerable resources to administering the SCHAP program, for example, through an extensive on-site effort of employer recruitment, individual enrollment, and program monitoring. Administrative expenses averaged 40 percent of total program costs, with a low of 26 percent in the final year of the program. This amounted to $58 per member per month in administrative expense. Clearly, a hallmark of the program was the level of "customer service" provided to both employers and employees. However, it would appear there were some "inefficiencies" introduced in administering the program on

such a small scale in two counties, and no opportunities to reap any economies by applying the knowledge or infrastructure from the demonstration to a larger geographic area.

From HAS, we observed the conflicts that can occur when a program is co-administered by two state agencies with different organizational styles, philosophies, motivations, and priorities. The Medicaid agency, which conceived of HAS, maintained a client advocacy orientation, while the Health Care Authority (HCA), which was charged with day-to-day operation of HAS, had a private insurance perspective. Initially, more attention was given to "learning to speak the same language" and resolving differences in the "cultures" of the administering agencies than to developing the infrastructure for eligibility determination, marketing, and education. None of the enrollment systems were automated at the time HAS was implemented. Additionally, the concept of targeted marketing was anathema to HCA staff. HCA staff also faced conflicting priorities. At the time HAS was being implemented, a state-subsidized health insurance program for low-income people, known as the Basic Health Plan (BHP), was being converted from a pilot phase to a permanent program. This meant that HCA was undergoing reorganization and expansion at the same time it was "burdened" with the additional responsibility of overseeing operations of HAS. This largely explains the low levels of enrollment of previously uninsured individuals in HAS.

On a more positive note, HAS served as a "learning experience" for other joint State initiatives between Medicaid and HCA. The introduction of BHP-Plus, a Medicaid extension for low-income children, was coordinated by HCA in July 1994. According to State Medicaid officials, this effort went much more smoothly as a result of experience gained

under the HAS demonstration.

Lesson 2: Enrollment Targets were not Easily Achieved

None of the three programs easily achieved their enrollment targets. The Maine Health Program (MHP) had originally set a target of 4,000 new enrollees (including approximately 2,000 rollovers from the State-funded MHP). Open enrollment yielded only 800 new eligibles; the remainder was identified through a review of Medicaid denials. SCHAP projected an average monthly enrollment of 1,300 members, with a first-year maximum of 1,390 at any one time; SCHAP staff expected the program to become fully subscribed very quickly. Clearly, this did not happen. Membership peaked at 1,211 in October 1995 – about 30 months into the program. Finally, HAS set a goal of 4,200 members, but after the first year, only 35 percent of this goal had been reached.

These demonstrations did not meet their enrollment targets for a number of reasons. SCHAP had narrow eligibility criteria which few employers could meet. Additionally, some employers were unwilling to offer a program to their low-income employees that provided a more generous benefit than was available to higher-income workers. The salient message of SCHAP is that income-based eligibility is not attractive to employers; instead, health insurance programs need to insure the entire group, perhaps with varying levels of subsidies based on income.

The reasons for low participation in Maine and Washington stem from the lack of marketing as well as volatility in the two programs. Neither Maine nor Washington committed significant resources to marketing the programs. A large share of the initial

enrollees were shifted from State-funded programs (the Maine Health Program and the Basic Health Plan) into the demonstration. Otherwise, word of mouth was the dominant mode of information about the program. Little formal outreach and marketing of the program was conducted. In Washington, program administrators were concerned that too much marketing would result in waiting lists, and did not want to turn people away. Interestingly, the plans were willing to finance State marketing efforts for HAS, but the State declined the offer.

Other factors accounting for low enrollment in Washington included a lack of local presence in the demonstration county (which was 260 miles away from the State Capitol); a lack of unified State support for the program; inadequate data systems for identifying and enrolling those who were eligible for HAS; and possible welfare stigma associated with HAS. Premature cancellation of the program was announced approximately 15 months after the program began because the State was unwilling to commit additional resources to conduct a large-scale marketing campaign. Ironically, enrollment climbed steadily after the media blitz denouncing the premature termination of the program. The HAS demonstration period also was marked by the "rise and fall" of health care reform in Washington State, which also served to divert attention away from the demonstration.

In Maine, program volatility also affected the program's enrollment history. The open enrollment took place at the same time the Governor was proposing to eliminate the program. Little advance notice was provided of the open enrollment period (less than 10 days). As a result, only 800 new enrollees came from the open enrollment. Instead, most of the new enrollees (about 3,000) were identified through a review of Medicaid denials for MHP eligibility. No new enrollments were admitted after December 1993 until the program ended

in March 1995.

The experience of the Medicaid Expansion Demonstration demonstrates that simply offering a program to low-income, uninsured individuals, families, or employees does not ensure they will know about the program or choose to participate. Moreover, program volatility negatively affects States' willingness to market the program and individuals' willingness to join the program.

Lesson 3: Program Orientation Affected Enrollment and the Resulting Risk Pool

Two of the programs – SCHAP and HAS – pursued innovative efforts to privatize or decentralize Medicaid-like coverage, by positioning the coverage as "insurance" rather than simply "claims payment." Both programs deliberately avoided a direct association with Medicaid. In contrast, MHP was a direct extension of the Medicaid program. The three programs provide an interesting contrast in the reasons enrollees cited for joining, which also mirror the programs' orientation.

We found that enrollees in Maine were far more likely to join MHP because of a "current medical condition," reflecting the role of the Maine medical community (especially hospitals) in referring their patients to the program. The program was developed and implemented as if MHP were another category of Medicaid, and like Medicaid, enrollees perceived MHP as a way to pay medical bills when they were sick. The program was not marketed as an insurance product, and enrollees did not seem to understand that they could not re-enroll at will. Consequently many enrollees declined to complete the six-month recertification when not actively receiving treatment and lost eligibility.

SCHAP enrollees, on the other hand, were most likely to join the demonstration to protect against a "possible future accident or illness," reflecting the insurance orientation of the program. SCHAP was deliberately "de-linked" from Medicaid and marketed as an employer-based insurance product. As an employment-based program, SCHAP enrollees were in better health than those enrolled in the other two programs.

HAS, too, was disassociated from Medicaid, and was positioned as a private insurance product like the Basic Health Plan. As a result, enrollees tended to report they joined HAS to protect against future health care needs, as well to afford routine checkups, consistent with the managed care orientation of the program. (Moreover, when compared with traditional medical population, SCHAP enrollees were lower cost.)

We have observed, therefore, that each program's orientation and implementation directly affects the risk profile. MHP's association with Medicaid tended to attract a sicker risk profile. However, from an insurance perspective, these risks may not be insurable if individuals enroll when they need care, and disenroll when they no longer need care (Wintringham and Bice, 1985). On the other hand, employment-based coverage, like SCHAP, "self-selects" those who are working and typically are healthier than those who are not working. It would appear that individual coverage through a publicly-subsidized insurance program, such as HAS, attracts a broader mix of enrollees – poor and nonpoor, employed and unemployed, and healthy and sick.

Lesson 4: Private Insurance "Crowd-Out" Was Not a Problem

A concern with any Medicaid expansion is whether individuals will drop their private

insurance coverage in favor of publicly-funded or subsidized coverage (Cutler and Gruber, 1995; Dubay and Kenney, 1997). Across the three programs, no more than 15 percent of those surveyed reported having private coverage prior to joining the demonstration. Many of these were likely to have been underinsured.

The highest level of private coverage was found in Maine (13.6 percent), where health status was poorest, suggesting that MHP enrollees may have dropped their private coverage to obtain richer benefits as well as to eliminate cost-sharing.

In South Carolina, where 10 percent reported private coverage prior to joining SCHAP, the employer could not have offered health insurance within the last 12 months. Those who reported prior coverage could have obtained it through a spouse or from a previous job. Interestingly, few insurance brokers in the two counties even knew SCHAP existed.

HAS enrollees had the lowest level of prior private coverage (7.1 percent). One possible explanation is that the level of marketing and outreach was so limited that most people with private coverage would not have known about HAS. Indeed, the demonstration attracted predominantly those who were uninsured or who were insured through a state-subsidized program. Most individuals enrolled in the demonstration reported that they could not afford health insurance coverage (71 percent in Maine and 46 percent in Washington) when they were employed. Very few individuals reported that they did not *want* health coverage.

The analysis, therefore, does not provide evidence that private insurance was "crowded out" by expansion of Medicaid Eligibility under the demonstration.

Lesson 5: Variations in Program Structure Were Associated with Variations in Access and Satisfaction

Our analysis has shown that the structure of the service delivery system can affect levels of access and satisfaction. The capitated managed care system under HAS performed relatively more favorably than the other two programs. Of particular note were the lower levels of hospital-based ambulatory care and higher levels of office-based care in Washington, relative to the other two programs. For example, 66 percent of HAS enrollees but only 48 percent of MHP enrollees had an ambulatory visit in a three-month period. This is likely a function of the availability of a "medical home" in HAS. Unmet need was significantly lower in Washington than in the other two states. Satisfaction also tended to be higher in the capitated system in Washington than in the two fee-for-service programs. In particular, satisfaction with the cost of care was highest in Washington (78 percent were very satisfied), intermediate in South Carolina (61 percent), and lowest in Maine (45 percent).

A general insight of the Medicaid Expansion Demonstration is that managed care is acceptable to low-income populations. The results reveal a fundamental irony of Medicaid managed care. Contrast, for example, the features of the HAS and MHP programs. HAS restricted access to a network of providers established by the two managed care plans. In theory, MHP offered unrestricted access to providers under a fee-for-service delivery system. In reality, however, the appearance of freedom-of-choice was just an appearance, given the unwillingness of many providers to participate in Maine's Medicaid program. Differences in the level of satisfaction with regard to provider choice seem to reflect an anomaly of Medicaid managed care – restricting freedom-of-choice through a private managed care provider

network can actually expand access for Medicaid beneficiaries. Anecdotal evidence obtained during the case study suggests that provider capacity under HAS exceeded that under traditional medicaid fee-for-service. Some providers opted to participate through the managed care program although they closed their practices to Medicaid fee-for-service patients. Moreover, perceived quality of care is higher.

Lesson 6: Aggressive Program Management Can Result in Under-Utilization

We surmise that the aggressive management of utilization and costs by SCHAP staff contributed to lower levels of utilization relative to enrollees in the other two states, and consequently, higher levels of unmet need reported by SCHAP enrollees. Anecdotal evidence from the case study suggests that SCHAP staff monitored and followed up on every hospitalization and emergency room visit. Additionally, according to the SCHAP Final Report, members were advised during orientation that "if they abused the program or did not follow the guidelines for obtaining treatment, they could endanger the economic stability of the program or face paying the total bill themselves." Conversely, SCHAP staff apparently portrayed the message that low expenditures could result in expansion of the program. We speculate that such messages, although well-intentioned, may have encouraged subscribers to not seek care or to delay seeking care due to concerns about losing their own coverage, or threatening others' coverage. However, this was never confirmed in the case study interviews.

Interestingly, we observed that levels of unmet need declined over time among continuous SCHAP enrollees. These findings are consistent, too, with the utilization and cost

results, which showed an upward trend over the three years. This suggests that SCHAP staff were less vigilant in their management of utilization and costs as the SCHAP program became more established and the future of the demonstration was in less jeopardy. (Moreover, SCHAP enrolees' recall of the orientation message likely diminished over time.) Our conclusion, therefore, is that under-utilization can occur if care is "over-managed."

Lesson 7: Concerns About Pent-up Demand were Unfounded

We examined the relationship between length of enrollment and patterns of utilization and cost to determine whether there was any evidence of pent-up demand. Some have found a "start-up effect," whereby those who were uninsured had higher levels of use when they first obtained insurance coverage, due to previous unmet needs (Wintringham and Bice, 1985). However, as might be expected, recent evidence suggests that pent-up demand is most profound among those without insurance for at least one year (Martin *et al.*, 1997).

In general, we did not find evidence of pent-up demand in our analyses. Utilization was reasonably consistent over time or tapered off gradually as length of enrollment increased. Except in one instance, we did not find unusually high levels of utilization or costs during the initial months of enrollment. The one exception was in Maine, where hospital use was highest in the first month of the program and then steadily declined. However, this is unlikely to reflect true pent-up demand, but rather, is more likely an artifact of the enrollment process. Anecdotal evidence suggests that hospitals were enrolling patients already admitted in order to get their bills paid. Our results are certainly consistent with that scenario. It seems improbable that hospital admissions could have been scheduled on such short notice.

Our analysis should be comforting to managed care plans that are considering coverage of low-income, previously uninsured populations. From a rate-setting perspective, the results imply that utilization is not extraordinarily high in the first few months of enrollment. Our analysis has not addressed the *administrative costs* associated with turnover in programs for low-income populations. The average length of enrollment was 13 to 14 months across the three demonstration programs, although substantial proportions were enrolled for six months or less (24 percent in MHP, 34 percent in SCHAP, and 33 percent in HAS). Our results suggest that enrollment turnover may have less of an adverse effect on health care costs than on administrative costs.

Lesson 8: Elimination of Cost-Sharing Stimulated Higher Levels of Utilization

Although we found no evidence of pent-up demand, we did find that utilization patterns varied depending on the benefit structure. We compared probabilities and levels of use between two programs in Washington State, the Health Access Spokane demonstration and the Basic Health Plan (BHP). BHP was a publicly-subsidized insurance program for low-income individuals and families, which required a monthly premium and copayments at point-of-service, and had a 12-month pre-existing condition clause. The maximum premium payment for BHP was $600 per year for individuals and $1,200 for families at the time HAS began. Additionally, the BHP copayments were not inconsequential for a low-income population: $8 to $10 per doctor visit (excluding preventive care), $25 to $50 per emergency room visit, and up to $100 per hospital stay. HAS, on the other hand, had no premiums, no copayments, and no limits on use for pre-existing conditions.

As would be expected, HAS members had a significantly higher probability of ambulatory care use than BHP members (also low-income and living in Spokane County), in the range of 50 percent higher. Similarly, the probability of hospitalization was 46 percent higher. It is unlikely, however, that this entire differential is due to variations in the benefit structure. Unobserved differences in health status between HAS and BHP members likely account for some (but an unknown) magnitude of the utilization differential. For example, we found that 14 percent of HAS enrollees were in fair or poor health, compared to 9 percent of BHP enrollees in 1989 (Diehr *et al.*, 1993). Assuming the sicker BHP enrollees opted to enroll in HAS, the actual differential may be even greater.

The lack of cost-sharing in HAS was a source of consternation within HCA (the agency responsible for day-to-day operations of HAS). They felt that HAS should institute a copayment, to instill responsibility among members in making prudent decisions about health care utilization. The absence of "demand-side" cost-sharing, they argued, resulted in overutilization.

It would also appear from the utilization analyses that utilization levels differed between the two managed care organizations which served both HAS and BHP members. Enrollees in Group Health Northwest (GHNW), which was predominantly a group-model HMO, had significantly lower levels of use than those covered by Medical Services Corporation (MSC), an IPA-model. One implication is that the salaried payment arrangement among GHNW providers resulted in more effective utilization controls than the discounted fee-for-service arrangement in MSC. Thus, "supply-side" financial incentives appear to have been significant determinants of utilization as well.

Additional research is needed to model the impact of cost-sharing on utilization behavior, specifically within a low-income population. More sophisticated risk adjustment is required to control for potential selection effects of sicker people into high-option plans

Lesson 9: The Administrative Costs of Coordinating Employer-Based and Other Coverage are High

All three programs initially had some provision for employer participation, as mandated in OBRA-90. The experience in Maine and Washington has demonstrated the complexities of developing an employer-based subsidy program (or Medicaid "buy-in").

In Maine, for example, the State screened MHP applicants for the availability of private coverage. The State paid the premium for private coverage if it was found to be "cost-effective" relative to enrolling the beneficiary in MHP. The State offered wraparound coverage for benefits covered under MHP but not offered through employer-based plans. Originally, by statute, MHP was required to pay the employer or insurer for the employee's premium share. However, most employers were unwilling to participate on this basis because of the administrative difficulty of processing premium payments on other than a payroll deduction basis. Subsequent legislation authorized MHP to reimburse enrollees directly for the premium share. Only about 2.5 percent of MHP enrollees participated through employer-based plans, mostly with direct reimbursement to employees. Thus, most employers had little or no direct involvement with MHP. This is consistent with a recent study of three states, which found small enrollments and minimal cost-savings in their Health Insurance Premium Payment (HIPP) programs (, 1997).

An opposite approach was planned in Washington, whereby the State intended to ask

the employer of eligible HAS beneficiaries who were employed to contribute to the premium HAS paid to the two participating HMOs. Thus, the State hoped to find private employers who would subsidize HAS. The employer subsidy was never implemented because of program staff concerns about the temporary duration of HAS and the potential conflict that could be created if the employer paid for some workers but not others. Moreover, the HMOs were concerned about the potential impact on their small group and individual products. Thus, the State abandoned all plans for an employer component under HAS.

The South Carolina demonstration, in contrast, was entirely based on employer participation. Although the program was considered a broad success, the demonstration carried a steep administrative cost associated with employer recruitment and customer service. Administrative costs amounted to 40 percent of total program costs. While we would not expect such high administrative costs were the program to be administered on a statewide basis following the demonstration, the SCHAP experience nevertheless demonstrates the costliness of intensive employer outreach, eligibility determination, and program monitoring.

A key concern about coordinating employer-based and other coverage is the broader generosity of traditional Medicaid benefits. In the case of MHP, the State paid for services not covered under the private benefit package, thus increasing the administrative complexity of the subsidy program. In the future, it may be neither administratively reasonable, nor fiscally prudent, for a State to augment private coverage with more generous Medicaid benefits.

Lesson 10: Employers Were Willing to Participate in a Medicaid Expansion Program

The underpinning of the South Carolina demonstration was the provision of employer-based health insurance coverage to small businesses with a preponderance of low-income workers. The program seems to have attracted a disproportionate share of family businesses, which joined for "peace of mind."

Employers who participated in SCHAP were very positive about their experience. They were strongly committed to the success of the program and wanted very much to see it continue indefinitely. They were very satisfied with the benefits, costs, and administrative aspects of SCHAP. The level of satisfaction is not surprising because of the way in which SCHAP was designed. Its premiums were much less expensive than competing premiums because they were heavily subsidized by the Federal grant. They received the Medicaid benefit package, which is quite comprehensive compared to benefits typically offered in the small group market (which are often quite limited to keep the premium low).

The level of administrative service provided by SCHAP staff was exceptional; the ratio of firms to SCHAP staff was quite low. It would be a challenge to provide the same high level of service in a program that was large enough to lower average fixed costs sufficiently to compete in the private market. However, SCHAP was designed as a public program to serve a population that is not served well by the private market, so that high administrative costs relative to commercial plans which screen their risks may be justifiable.

There was one source of dissatisfaction with SCHAP – the narrow eligibility criteria for employers and their employees. SCHAP demonstrated the inequity of covering low-income employees within a business, but not covering a firm's higher-income employees.

This made the program less attractive to employers who were unwilling to offer a more generous benefit to their low-wage workers. Provision must be made for covering workers who do not meet the stringent low-income threshold required for subsidized coverage. Based on the SCHAP experience, less restrictive eligibility criteria would be expected to increase participation, decrease administrative overhead, and improve acceptance among the general population of employers. One caveat, however, is that subsidy programs are costly and typically generate relatively low enrollments, especially if they are of a temporary duration (USGAO, 1992).

10.3 Phase-Down of the Demonstration

The Medicaid Expansion Demonstration has ended and the effects seem to have been short-lived. In South Carolina and Maine, most of the demonstration participants returned to being uninsured. Most of the enrollees in the Washington demonstration transferred to the Basic Health Plan, which was already in place at the time HAS began.

MHP was terminated prematurely in March 1995, due to a lack of political will to continue the program. Two-thirds of the MHP enrollees became uninsured, and another 11 percent obtained Medicaid coverage. About 20 percent obtained private insurance coverage following disenrollment from MHP. MHP, therefore, provided short-term coverage for the uninsured; long-term solutions are still required.

SCHAP was extended one year beyond the original demonstration through additional Federal waivers, but ultimately ended in January of 1997. Although the local Health Access Board and employers had attempted to develop a small business purchasing pool to take the

place of SCHAP, that never came to pass. The Institute on Poverty and Deprivation, which had provided administrative support to the Health Access Board, discontinued operations in mid-1996 due to lack of funding. Additionally, the Health Access Board experienced discontinuities in leadership in late-1996 and it too disbanded. The business community in Horry and Marion counties was unable to form an association to purchase health insurance, although they were only 50 employees short of the minimum purchasing pool size of 1,000 employees.

When HAS ended in March 1996, most members joined the Basic Health Plan (BHP), a state-subsidized health insurance program, which pre-dated HAS. The State estimates 93 percent of HAS participants transferred to BHP. It would appear that most participants from the HAS demonstration made a successful transition to another form of insurance coverage. It is unknown, however, how long HAS members will remain enrolled in BHP. HAS had no premiums or copayments, while BHP has both; BHP premiums range from $10 to $30 per month. Apparently, HAS members who did not select a BHP managed care plan were randomly assigned to the more expensive plans.

The experience of the Medicaid Expansion Demonstration suggests that it is difficult to sustain experimental programs due to budgetary and political constraints. With the exception of Washington State, which already had the Basic Health Plan in place at the time HAS began, neither of the other two programs has led to lasting reform.

10.4 Concluding Remarks

The Medicaid Expansion Demonstration has taught us valuable lessons about the promises and challenges of creating health insurance programs for low-income people who are uninsured. This evaluation is extremely timely in light of the recent and ongoing decline in private insurance coverage (USGAO, 1997).

Perhaps the most significant lesson of the Medicaid Expansion Demonstration is that the achievement of enrollment targets is not guaranteed, even if the program is free and eligibility criteria are generous. Marketing and outreach are required, and this can be an expensive and labor-intensive effort, as SCHAP has demonstrated. When multiple stakeholders are involved, as was the case with HAS, differences in the "cultures" of administering agencies can limit the commitment to marketing, and hence, the very viability of the program. Similarly, Maine's fiscal uncertainty served to dampen enthusiasm for the program and minimized the success of open enrollment.

Nevertheless, the results clearly have shown that demonstration enrollees were better off when they were enrolled in the program than after they lost coverage, due to disenrollment (as evidenced in South Carolina) or because the program ended (as we saw in Maine). We conclude that the Medicaid Expansion Demonstration served to eliminate financial barriers to care, and thereby reduced levels of unmet need. This was achieved largely by improving access to ambulatory care, especially in non-hospital-based settings.

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Appendix A

Appendix Table 5-1
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Number of Physician Office Visits	Number of Outpatient Visits	Number of Emergency Room Visits
Intercept	-0.109329 ***	-0.141033 ***	0.205379 ***
	(0.02524)	(0.01841)	(0.01137)
Federal Waiver Status	-0.088753 ***	-0.060558 ***	-0.00864 **
	(0.00965)	(0.00703)	(0.00434)
Open Enrollment	-0.015638 *	-0.008841	-0.002654
	(0.00832)	(0.00609)	(0.00376)
Enrollment through Review of Medicaid Denials	-0.026543 ***	-0.02539 ***	-0.005781
	(0.00782)	(0.00571)	(0.00352)
Hospital Payments Reduced by Half	-0.0283 ***	-0.024199 ***	0.010416 ***
	(0.00838)	(0.00611)	(0.00377)
Hospital Payments Eliminated	-0.157689 ***	-0.095076 ***	0.006457
	(0.01258)	(0.00917)	(0.00566)
Months Continuously Eligible	-0.000536 **	-0.000818 ***	-0.00007
	(0.00021)	(0.00015)	(0.00010)
Reciprocal of Months Continuously Eligible	-0.15413 ***	-0.072122 ***	-0.016959 ***
	(0.01279)	(0.00933)	(0.00576)
Multiple Enrollment Segments	0.017326 ***	-0.005098 *	0.007051 ***
	(0.00422)	(0.00308)	(0.00190)
Female	0.123347 ***	0.075597 ***	-0.001645
	(0.00405)	(0.00295)	(0.00182)
Age	0.007618 ***	0.005695 ***	-0.005008 ***
	(0.00115)	(0.00084)	(0.00052)
Age-Squared	-0.00006 ***	-0.00005 ***	0.00004 ***
	(0.00001)	(0.00001)	(0.00001)
Physician to Population Ratio	0.34371 ***	0.33317 ***	0.130584 ***
	(0.02480)	(0.01809)	(0.01117)
Elapsed Time	0.006711 ***	0.005137 ***	-0.000317
	(0.00062)	(0.00045)	(0.00028)
R-Squared	**0.0154**	**0.0118**	**0.0065**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Number of Primary Care Physician Visits	Number of Specialty Care Visits	Number of Hospital Admissions
Intercept	0.017416	-0.102192 ***	-0.001924
	(0.01539)	(0.01655)	(0.00322)
Federal Waiver Status	-0.035521 ***	-0.03759 ***	-0.000852
	(0.00588)	(0.00632)	(0.00123)
Open Enrollment	-0.003216	-0.015026 ***	-0.003266 ***
	(0.00509)	(0.00548)	(0.00107)
Enrollment through Review of Medicaid Denials	-0.015254 ***	-0.011766 **	-0.000691
	(0.00477)	(0.00513)	(0.00100)
Hospital Payments Reduced by Half	-0.011542 **	-0.016748 ***	-0.000884
	(0.00511)	(0.00549)	(0.00107)
Hospital Payments Eliminated	-0.058218 ***	-0.073484 ***	-0.005243 ***
	(0.00767)	(0.00824)	(0.00161)
Months Continuously Eligible	-0.000338 ***	-0.000117	-0.00006 **
	(0.00013)	(0.00014)	(0.00003)
Reciprocal of Months Continuously Eligible	-0.0706 ***	-0.065323 ***	0.009263 ***
	(0.00779)	(0.00838)	(0.00163)
Multiple Enrollment Segments	0.013869 ***	0.008694 ***	-0.000504
	(0.00257)	(0.00276)	(0.00054)
Female	0.055759 ***	0.043588 ***	-0.001164 **
	(0.00247)	(0.00266)	(0.00052)
Age	-0.00031	0.005707 ***	8.0773E-05
	(0.00070)	(0.00076)	(0.00015)
Age-Squared	0.00002 ***	-0.00006 ***	0.00000
	(0.00001)	(0.00001)	(0.00000)
Physician to Population Ratio	0.035444 **	0.241458 ***	0.025267 ***
	(0.01512)	(0.01625)	(0.00317)
Elapsed Time	0.002775 ***	0.003285 ***	0.000169 **
	(0.00038)	(0.00040)	(0.00008)
R-Squared	**0.0090**	**0.0067**	**0.0018**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Total Costs	Log of Inpatient Costs	Log of Inpatient Facility Costs
Intercept	0.321546 ***	0.026229	0.024678
	(0.07496)	(0.02610)	(0.02257)
Federal Waiver Status	-0.21374 ***	-0.001137	0.011105
	(0.02864)	(0.00997)	(0.00862)
Open Enrollment	-0.018897	-0.026161 ***	-0.019308 ***
	(0.02481)	(0.00864)	(0.00747)
Enrollment through Review of Medicaid Denials	-0.120736 ***	-0.005847	-0.003874
	(0.02323)	(0.00809)	(0.00699)
Hospital Payments Reduced by Half	-0.093647 ***	-0.002032	0.002905
	(0.02488)	(0.00866)	(0.00749)
Hospital Payments Eliminated	-0.688401 ***	-0.051517 ***	-0.056408 ***
	(0.03735)	(0.01301)	(0.01124)
Months Continuously Eligible	-0.003385 ***	-0.000696 ***	-0.000265
	(0.00063)	(0.00022)	(0.00019)
Reciprocal of Months Continuously Eligible	-0.618882 ***	0.068505 ***	0.075002 ***
	(0.03798)	(0.01322)	(0.01143)
Multiple Enrollment Segments	0.005028	-0.00628	-0.00293
	(0.01252)	(0.00436)	(0.00377)
Female	0.51077 ***	-0.005033	-0.010183 ***
	(0.01203)	(0.00419)	(0.00362)
Age	0.023532 ***	-0.000489	0.00009
	(0.00343)	(0.00119)	(0.00103)
Age-Squared	-0.000248 ***	0.00002	0.00001
	(0.00004)	(0.00001)	(0.00001)
Physician to Population Ratio	1.738782 ***	0.25142 ***	0.175279 ***
	(0.07364)	(0.02564)	(0.02217)
Elapsed Time	0.020732 ***	0.000965	-0.000151
	(0.00183)	(0.00064)	(0.00055) ***
R-Squared	**0.0276**	**0.0025**	**0.0036**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	**Log of Inpatient Professional Costs**	**Log of Emergency Room Costs**	**Log of Outpatient Costs**
Intercept	0.014596 (0.01960)	0.708128 *** (0.03298)	0.068747 (0.04695)
Federal Waiver Status	-0.005154 (0.00749)	0.054128 *** (0.01260)	-0.018368 (0.01794)
Open Enrollment	-0.018582 *** (0.00649)	-0.001909 (0.01092)	-0.033241 ** (0.01554)
Enrollment through Review of Medicaid Denials	-0.003619 (0.00607)	-0.005659 (0.01022)	-0.036225 ** (0.01455)
Hospital Payments Reduced by Half	-0.002729 (0.00650)	0.04627 *** (0.01095)	-0.030934 ** (0.01558)
Hospital Payments Eliminated	-0.030547 *** (0.00977)	-0.116175 *** (0.01643)	-0.410235 *** (0.02339)
Months Continuously Eligible	-0.000603 *** (0.00016)	-0.00008 (0.00028)	-0.002551 *** (0.00039)
Reciprocal of Months Continuously Eligible	0.034031 *** (0.00993)	-0.046038 *** (0.01671)	-0.243595 *** (0.02379)
Multiple Enrollment Segments	-0.00372 *** (0.00327)	0.017408 *** (0.00551)	0.003495 (0.00784)
Female	-0.002237 (0.00315)	-0.006143 (0.00529)	0.166939 *** (0.00754)
Age	-0.000469 (0.00090)	-0.013169 *** (0.00151)	0.007723 *** (0.00215)
Age-Squared	0.00002 * (0.00001)	0.000101 *** (0.00002)	-0.00004 * (0.00003)
Physician to Population Ratio	0.173721 *** (0.01926)	0.367308 *** (0.03240)	0.863839 *** (0.04612)
Elapsed Time	0.001032 ** (0.00048)	-0.006272 *** (0.00081)	0.005705 *** (0.00115)
R-Squared	**0.0018**	**0.0182**	**0.0195**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Office Visit Costs	Log of Physician Service Costs	Log of Primary Care Physician Costs
Intercept	-0.091588	0.04394	0.077505 **
	(0.06064)	(0.05575)	(0.03784)
Federal Waiver Status	-0.254826 ***	-0.23079 ***	-0.098737 ***
	(0.02317)	(0.02130)	(0.01446)
Open Enrollment	0.027999	-0.074408 ***	-0.012695
	(0.02007)	(0.01845)	(0.01252)
Enrollment through Review of Medicaid Denials	-0.090265 ***	-0.081544 ***	-0.043365 ***
	(0.01879)	(0.01728)	(0.01173)
Hospital Payments Reduced by Half	-0.090835 ***	-0.075469 ***	-0.0218 *
	(0.02012)	(0.01850)	(0.01256)
Hospital Payments Eliminated	-0.418631 ***	-0.354636 ***	-0.14918 ***
	(0.03022)	(0.02778)	(0.01885)
Months Continuously Eligible	-0.001618 ***	-0.002204 ***	-0.000965 ***
	(0.00051)	(0.00047)	(0.00032)
Reciprocal of Months Continuously Eligible	-0.565932 ***	-0.384329 ***	-0.175875 ***
	(0.03072)	(0.02824)	(0.01917)
Multiple Enrollment Segments	0.014352	0.018352 **	0.030706 ***
	(0.01013)	(0.00931)	(0.00632)
Female	0.473638 ***	0.324716 ***	0.153508 ***
	(0.00973)	(0.00895)	(0.00607)
Age	0.024514 ***	0.011743 ***	-0.000825
	(0.00277)	(0.00255)	(0.00173)
Age-Squared	-0.000253 ***	0.00005	0.00008 ***
	(0.00003)	(0.00003)	(0.00002)
Physician to Population Ratio	0.522225 ***	0.767198 ***	0.138414 ***
	(0.05957)	(0.05477)	(0.03717)
Elapsed Time	0.021704 ***	0.016336 ***	0.007319 ***
	(0.00148)	(0.00136)	(0.00092)
R-Squared	**0.0262**	**0.0208**	**0.0128**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHIP Enrollees

Variable	Log of Specialty Care Costs	Log of Other Professional Costs	Log of Medical Care Costs
Intercept	-0.076248 (0.04682)	-0.136775 *** (0.04554)	-0.226006 *** (0.04222)
Federal Waiver Status	-0.159041 *** (0.01789)	-0.103715 *** (0.01740)	-0.101713 *** (0.01613)
Open Enrollment	-0.076318 *** (0.01550)	0.08028 *** (0.01507)	0.016884 (0.01397)
Enrollment through Review of Medicaid Denials	-0.056998 *** (0.01451)	-0.033447 ** (0.01411)	-0.046748 *** (0.01308)
Hospital Payments Reduced by Half	-0.067981 *** (0.01554)	-0.044769 *** (0.01511)	-0.032818 ** (0.01401)
Hospital Payments Eliminated	-0.249504 *** (0.02333)	-0.184397 *** (0.02269)	-0.220999 *** (0.02104)
Months Continuously Eligible	-0.001641 *** (0.00039)	-0.000351 (0.00038)	-0.00073 ** (0.00035)
Reciprocal of Months Continuously Eligible	-0.21746 *** (0.02372)	-0.269977 *** (0.02307)	-0.162395 *** (0.02139)
Multiple Enrollment Segments	-0.005318 (0.00782)	-0.011909 (0.00761)	-0.002313 (0.00705)
Female	0.195758 *** (0.00751)	0.224146 *** (0.00731)	0.157355 *** (0.00678)
Age	0.013147 *** (0.00214)	0.020209 *** (0.00208)	0.013968 *** (0.00193)
Age-Squared	-0.000116 *** (0.00003)	-0.000299 *** (0.00003)	-0.000107 *** (0.00002)
Physician to Population Ratio	0.746614 *** (0.04600)	0.078877 * (0.04474)	-0.02961 (0.04148)
Elapsed Time	0.011011 *** (0.00114)	0.010405 *** (0.00111)	0.012254 *** (0.00103)
R-Squared	**0.0115**	**0.0111**	**0.0102**

Appendix Table 5-1 (continued)
OLS Regression of Utilization and Cost Measures Among MHP Enrollees

Variable	Log of Surgery Costs	Log of Ancillary Costs	Log of Mental Health/ Substance Abuse Costs
Intercept	-0.019484	0.059427 *	-0.130632 ***
	(0.04870)	(0.03354)	(0.02696)
Federal Waiver Status	-0.165467 ***	-0.080756 ***	-0.03167 ***
	(0.01861)	(0.01281)	(0.01030)
Open Enrollment	-0.055512 ***	-0.017002	0.005653
	(0.01612)	(0.01110)	(0.00892)
Enrollment through Review of Medicaid Denials	-0.058139 ***	-0.027388 ***	-0.003557
	(0.01509)	(0.01039)	(0.00835)
Hospital Payments Reduced by Half	-0.060375 ***	-0.024446 **	-0.003158
	(0.01616)	(0.01113)	(0.00895)
Hospital Payments Eliminated	-0.298705 ***	-0.159439 ***	-0.066197 ***
	(0.02427)	(0.01671)	(0.01343)
Months Continuously Eligible	-0.001647 ***	-0.000793 ***	-0.000185
	(0.00041)	(0.00028)	(0.00023)
Reciprocal of Months Continuously Eligible	-0.325181 ***	-0.120088 ***	-0.094843 ***
	(0.02467)	(0.01699)	(0.01366)
Multiple Enrollment Segments	0.032267 ***	0.017329 ***	-0.025582 ***
	(0.00814)	(0.00560)	(0.00450)
Female	0.259491 ***	0.184388 ***	0.046743 ***
	(0.00782)	(0.00538)	(0.00433)
Age	0.00853 ***	-0.001373	0.014202 ***
	(0.00223)	(0.00153)	(0.00123)
Age-Squared	0.00002	0.00006 ***	-0.00021 ***
	(0.00003)	(0.00002)	(0.00001)
Physician to Population Ratio	0.672339 ***	0.216793 ***	0.473324 ***
	(0.04784)	(0.03295)	(0.02648)
Elapsed Time	0.013735 ***	0.006984 ***	0.001126 *
	(0.00119)	(0.00082)	(0.00066)
R-Squared	**0.0181**	**0.0147**	**0.0076**

Appendix Table 6-1

Logistic Regression of Utilization Among SCHAP Adult Enrollees

Variable	Probability of a Hospitalization	Probability of an Ambulatory Visit	Probability of an ER Visit
Intercept	-6.5467 ***	-1.2246 ***	-4.5285 ***
	(1.355)	(0.334)	(0.679)
Age	0.1056	0.0515 ***	0.1376 ***
	(0.064)	(0.017)	(0.036)
Age-Squared	-0.00082	-0.00039 *	-0.00212 ***
	(0.001)	(0.000)	(0.000)
Male	-0.4796 **	-0.7402 ***	-0.164
	(0.200)	(0.056)	(0.103)
White	0.3054	0.4219 ***	0.0744
	(0.240)	(0.066)	(0.122)
Above FPL	0.2707	-0.0496	-0.0274
	(0.226)	(0.061)	(0.112)
Horry County	-0.7326 ***	0.0307	-0.0838
(Marion and Other Counties omitted)	(0.221)	(0.074)	(0.136)
Year (1993 omitted)			
1994	-0.2794	0.2236 **	0.558 ***
	(0.313)	(0.094)	(0.192)
1995	-0.1966	0.417 ***	0.5965 ***
	(0.344)	(0.103)	(0.205)
Season (Winter omitted)			
(Winter Omitted)			
Spring	0.6937	-0.1096	0.0137
	(0.430)	(0.127)	(0.232)
Summer	-0.1538	-0.0958	0.0846
	(0.370)	(0.100)	(0.182)
Fall	0.3238	-0.1001	-0.1309
	(0.407)	(0.115)	(0.216)
Quarter	0.1946	-0.1459 ***	-0.1599 **
	(0.168)	(0.044)	(0.082)
Quarter-Squared	-0.0278	0.00732	0.0089
	(0.019)	(0.005)	(0.009)
n	**5620**	**5620**	**5620**
-2 Log Likelihood	**1045.02**	**7433.47**	**2953.86**
Chi-square	**46.022** ***	**332.6** ***	**57.859** ***

Appendix Table 6-1 (continued)

Logistic Regression of Utilization Among SCHAP Adult Enrollees

Variable	Probability of a Physician Visit	Probability of a Primary Care Visit	Probability of a Specialist Visit
Intercept	-1.3911 ***	-1.7702 ***	-3.3918 ***
	(0.339)	(0.354)	(0.495)
Age	0.0544 ***	0.0525 ***	0.0708 ***
	(0.017)	(0.018)	(0.024)
Age-Squared	-0.00041 *	-0.00046 **	-0.00055 *
	(0.000)	(0.000)	(0.000)
Male	-0.7809 ***	-0.7583 ***	-0.5554 ***
	(0.056)	(0.058)	(0.079)
White	0.4337 ***	0.3999 ***	0.3835 ***
	(0.067)	(0.070)	(0.095)
Above FPL	-0.052	-0.081	-0.0595
	(0.061)	(0.063)	(0.084)
Horry County	0.0511	0.504 ***	-0.5803 ***
(Marion and Other Counties omitted)	(0.075)	(0.082)	(0.095)
Year (1993 omitted)			
1994	0.1947 **	0.2682 ***	0.0732
	(0.095)	(0.097)	(0.135)
1995	0.3922 ***	0.3919 ***	0.3003 **
	(0.104)	(0.106)	(0.145)
Season (Winter omitted)			
(Winter Omitted)			
Spring	-0.1786	-0.2346 *	0.31 *
	(0.129)	(0.132)	(0.180)
Summer	-0.1473	-0.1992 *	0.2609 *
	(0.101)	(0.103)	(0.142)
Fall	-0.1214	-0.2105 *	0.2712 *
	(0.116)	(0.119)	(0.165)
Quarter	-0.1419 ***	-0.1714 ***	-0.0313
	(0.045)	(0.046)	(0.061)
Quarter-Squared	0.00604	0.0067	-0.00026
	(0.005)	(0.005)	(0.006)
n	**5620**	**5620**	**5620**
-2 Log Likelihood	**7325.1**	**7002.11**	**4548.09**
Chi-square	**363.33** ***	**380.322**	**168.328** ***

Appendix Table 6-2

Logistic Regression of Utilization Among SCHAP, AFDC, and Disabled Adults

Variable	Probability of a Hospitalization	Probability of an Ambulatory Visit	Probability of an ER Visit
Intercept	-5.6897 ***	-0.7295 ***	-3.0984 ***
	(0.502)	(0.186)	(0.280)
Age	0.0914 ***	0.0256 ***	0.0602 ***
	(0.023)	(0.009)	(0.013)
Age-Squared	-0.00086 ***	-0.00013	-0.00097 ***
	(0.000)	(0.000)	(0.000)
Male	0.0716	-0.5315 ***	-0.3007 ***
	(0.077)	(0.035)	(0.055)
White	0.1871 **	0.0748 **	-0.00788
	(0.079)	(0.036)	(0.054)
Horry County (Marion and Other Counties omitted)	-0.3718 *** (0.086)	-0.0456 (0.042)	-0.0914 (0.062)
Group (SCHAP omitted)			
AFDC	0.7122 ***	0.2545 ***	0.8981 ***
	(0.152)	(0.051)	(0.076)
Disabled	1.431 ***	-0.0415	0.8184 ***
	(0.110)	(0.039)	(0.065)
Year (1993 omitted)			
1994	-0.1379	0.0209	0.0857
	(0.110)	(0.051)	(0.077)
1995	-0.1416	0.0242	0.06
	(0.117)	(0.055)	(0.082)
Season (Winter omitted)			
Spring	0.4078 **	0.0208	0.0843
	(0.161)	(0.073)	(0.108)
Summer	0.1317	-0.0526	0.0163
	(0.135)	(0.059)	(0.089)
Fall	0.0942	-0.0785	-0.0401
	(0.156)	(0.067)	(0.102)
Quarter	-0.088	0.0637 **	-0.0362
	(0.057)	(0.025)	(0.038)
Quarter-Squared	0.00279	-0.00693 ***	0.00261
	(0.006)	(0.003)	(0.004)
n	**15458**	**15458**	**15458**
-2 Log Likelihood	**5876**	**21004**	**11236**
Chi-square	**413.24** ***	**411.86** ***	**348.55** ***

Appendix Table 6-2 (continued)

Logistic Regression of Utilization Among SCHAP, AFDC, and Disabled Adults

Variable	Probability of a Physician Visit	Probability of a Primary Care Visit	Probability of a Specialist Visit
Intercept	(0.218)	-1.3864 ***	-1.658 ***
	0.0417 ***	(0.194)	(0.210)
Age	(0.010)	0.0467 ***	0.0443 ***
	-0.00048 ***	(0.009)	(0.010)
Age-Squared	(0.000)	-0.00031 ***	-0.00026 **
	-0.3553 ***	(0.000)	(0.000)
Male	(0.041)	-0.5867 ***	-0.6031 ***
	0.0622	(0.036)	(0.038)
White	(0.041)	0.0766 **	0.00509
	-0.0492	(0.037)	(0.039)
Horry County	(0.048)	-0.0884 **	0.0877 *
(Marion and Other Counties omitted)		(0.042)	(0.046)
Group (SCHAP omitted)			
AFDC	0.8497 ***	-0.2275 ***	-0.5957 ***
	(0.059)	(0.053)	(0.057)
Disabled	0.6293 ***	-0.3193 ***	-0.5 ***
	(0.048)	(0.040)	(0.043)
Year (1993 omitted)			
1994	0.0543	0.0265	0.0912
	(0.059)	(0.053)	(0.057)
1995	-0.0162	0.0565	0.1705 ***
	(0.063)	(0.057)	(0.061)
Season (Winter omitted)			
Spring	(0.084)	-0.1319 *	-0.2534 ***
	0.0865	(0.075)	(0.080)
Summer	(0.068)	-0.1266 **	-0.1887 ***
	-0.00597	(0.060)	(0.064)
Fall	(0.078)	-0.1244 *	-0.18 **
		(0.069)	(0.073)
Quarter	-0.0173	0.1154 ***	0.0739 ***
	(0.029)	(0.026)	(0.027)
Quarter-Squared	0.000685	-0.0108 ***	-0.00836 ***
	(0.003)	(0.003)	(0.003)
n	**15458**	**15458**	**15458**
-2 Log Likelihood	**16878**	**20273**	**18466**
Chi-square	**440.01 *** **	**570.86 *** **	**662.6 *** **

Appendix Table 8-1

Determinants of Access in Maine (MHP): Impact of Program Termination

Variable	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Intercept	0.94	-1.41	-1.71	-2.36 **	-1.2	0.76	0.34	0.84
	(1.52)	(1.01)	(1.19)	(1.17)	(0.97)	(1.13)	(1.19)	(1.78)
Age	0.01	-0.01	0	-0.01	0	0.04 **	0	0.02
	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)
Gender (1=Male)	0.26	-0.54 *	-0.17	0.05	-0.35	0.52	-0.52	-0.07
	(0.46)	(0.32)	(0.35)	(0.34)	(0.31)	(0.32)	(0.37)	(0.38)
Race (1=White)	1.18 *	-0.65	-0.99 *	0.59	-0.04	-0.32	0.63	0.43
	(0.68)	(0.66)	(0.59)	(0.81)	(0.64)	(0.70)	(0.81)	(0.94)
Education (1=High School Graduate or Higher)	0.67	1.33 ***	0.03	-0.5	0.83 **	0.72 *	-0.32	0.36
	(0.43)	(0.45)	(0.43)	(0.33)	(0.39)	(0.38)	(0.47)	(0.39)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	1.02	0.04	0.34	0.15	-0.68	0.16	0.18	0.67
	(0.73)	(0.42)	(0.42)	(0.44)	(0.44)	(0.42)	(0.49)	(0.48)
Part-time	-0.26	0.47	0.02	0.4	0.2	0.46	0.15	0.65
	(0.46)	(0.35)	(0.40)	(0.37)	(0.33)	(0.34)	(0.47)	(0.45)
Not working (omitted)								

Appendix Table 8-1 (continued)

Determinants of Access in Maine (MHP): Impact of Program Termination

Variable	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Self-Reported Health Status								
Very Good	-0.06	-0.52	0.68	0.97	-0.42	-1.63 ***	0.66	-0.25
	(0.75)	(0.43)	(0.67)	(0.78)	(0.42)	(0.58)	(0.66)	(0.72)
Good	0.58	-0.75 *	0.99	1.3 *	-0.8 *	-1.26 **	-0.37	-0.85
	(0.73)	(0.45)	(0.63)	(0.72)	(0.44)	(0.58)	(0.61)	(0.74)
Fair/Poor	-0.02	0.27	1.41 **	1.59 **	-0.24	-1.24 **	0.1	0.31
	(0.78)	(0.51)	(0.69)	(0.76)	(0.50)	(0.63)	(0.66)	(0.78)
Excellent (omitted)								
Physical health interferes with social activities	-0.01	0.53	-0.78 **	0.02	0.3	0.49	0.83 *	0.21
	(0.60)	(0.39)	(0.38)	(0.40)	(0.37)	(0.39)	(0.45)	(0.43)
Mental health interferes with social activities	-0.41	0.46	0.49	-0.37	0.2	-0.01	0.55	0.42
	(0.50)	(0.39)	(0.41)	(0.40)	(0.36)	(0.31)	(0.41)	(0.42)
Health limits light activities	-0.62	-3.51 ***	-1.08 *	-0.04	-1.58 **	-0.47	0.19	-0.16
	(0.58)	(1.04)	(0.56)	(0.47)	(0.63)	(0.44)	(0.51)	(0.52)
Enrollees	-0.46	-1.11 ***	0.1	-0.44	-0.82 ***	-0.32	1.21 ***	-0.72 *
	(0.49)	(0.31)	(0.33)	(0.33)	(0.29)	(0.31)	(0.37)	(0.41)
R-square	0.0449	0.1831	0.0453	0.0470	0.1063	0.0691	0.0903	0.0489
n	462	460	458	458	459	462	459	460
chi-square	17.02	73.36	20.12	20.68	46.23	35.16	38.47	21.04

*p<0.10 **p<0.05 ***p<0.01

Appendix Table 8-2

Determinants of Satisfaction in Maine (MHP): Impact of Program Termination

	Satisfaction With							
	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Variable								
Intercept	3.08 *** (1.08)	5.94 *** (1.36)	3.27 ** (1.28)	2.8 *** (1.08)	2.77 ** (1.12)	4.77 *** (1.20)	3.25 *** (0.95)	2.44 *** (0.91)
Age	-0.01 (0.01)	-0.03 (0.02)	-0.02 (0.02)	-0.01 (0.01)	-0.03 * (0.02)	-0.03 ** (0.02)	-0.03 ** (0.01)	-0.03 *** (0.01)
Gender (1=Male)	0.25 (0.31)	-0.18 (0.38)	0.07 (0.32)	-0.19 (0.30)	0.62 (0.39)	-0.07 (0.36)	0.38 (0.29)	0.79 *** (0.27)
Race (1=White)	-0.67 (0.66)	-0.52 (0.83)	-0.28 (0.83)	-0.33 (0.60)	0.28 (0.56)	-0.83 (0.77)	0.04 (0.60)	0.15 (0.50)
Education (1=High School Graduate or Higher)	0.02 (0.37)	-1.01 (0.63)	-0.01 (0.43)	-0.31 (0.33)	-0.36 (0.44)	-0.54 (0.50)	-0.89 ** (0.35)	-0.61 * (0.33)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	-0.08 (0.36)	-0.23 (0.49)	-0.25 (0.41)	0.03 (0.37)	-0.2 (0.45)	0.06 (0.53)	0.18 (0.40)	0.14 (0.36)
Part-time	0.2 (0.35)	0.03 (0.48)	-0.52 (0.41)	0.02 (0.35)	-0.09 (0.40)	-0.56 (0.40)	0.58 (0.35)	0.63 ** (0.31)
Not working (omitted)								

Appendix Table 8-2 (continued)

Determinants of Satisfaction in Maine (MHP): Impact of Program Termination

	Satisfaction With							
	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Variable								
Self-Reported Health Status								
Very Good	-0.62	0.6	0.3	0.63	0.58	1.11 **	-0.14	0.31
	(0.46)	(0.64)	(0.53)	(0.56)	(0.53)	(0.55)	(0.47)	(0.42)
Good	-0.33	0.16	0.58	-0.46	0.91 *	1.07 **	-0.02	0.5
	(0.48)	(0.58)	(0.54)	(0.54)	(0.51)	(0.53)	(0.46)	(0.42)
Fair/Poor	-0.35	-0.03	0.72	-0.12	1.49 ***	0.92 *	0.18	0.85 *
	(0.54)	(0.63)	(0.58)	(0.65)	(0.57)	(0.55)	(0.54)	(0.50)
Excellent (omitted)								
Physical health interferes with social activities	-0.04	-0.64	0.23	-0.39	-0.07	0.27	-0.28	-0.46
	(0.33)	(0.52)	(0.39)	(0.38)	(0.42)	(0.39)	(0.40)	(0.35)
Mental health interferes with social activities	0.45	0.42	-0.16	0.65 *	0.19	-0.03	0.52	0.27
	(0.32)	(0.48)	(0.40)	(0.36)	(0.40)	(0.43)	(0.34)	(0.32)
Health limits light activities	0.83	0.09	-0.28	-0.05	-0.3	-0.28	0.03	0.15
	(0.53)	(0.59)	(0.48)	(0.39)	(0.57)	(0.45)	(0.51)	(0.42)
Enrollees	-1.34 ***	-2.32 ***	-1.53 ***	-0.93 ***	-0.97 **	-1.21 ***	-0.9 ***	-1.34 ***
	(0.35)	(0.68)	(0.43)	(0.33)	(0.41)	(0.43)	(0.32)	(0.28)
R-square	0.0683	0.1260	0.0767	0.0560	0.0453	0.0491	0.0545	0.1325
n	376	254	285	414	378	399	406	393
chi-square	30.36	32.19	25.20	27.11	21.22	22.14	27.75	60.30

*p<0.10 **p<0.05 ***p<0.01

Appendix Table 8-3

Determinants of Access in South Carolina (SCHAP): Impact of Disenrollment

	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Variable								
Intercept	-2.46 ***	0.17	0.13	0.68 ***	-0.13	0.15	-0.13	-0.24
	(0.18)	(0.29)	(0.20)	(0.25)	(0.26)	(0.26)	(0.18)	(0.35)
Age	0.01 ***	0	0	-0.01 **	0	0	0	0
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Gender (1=Male)	0	0.12	-0.04	0.08	0.05	-0.02	0.1	-0.01
	(0.05)	(0.08)	(0.06)	(0.07)	(0.08)	(0.08)	(0.07)	(0.08)
Race (1=White)	0.04	-0.33 ***	-0.01	-0.18 **	-0.18 **	0.01	-0.08	0.03
	(0.05)	(0.09)	(0.06)	(0.08)	(0.09)	(0.09)	(0.07)	(0.11)
Education (1=High School Graduate or Higher)	0.11 ***	-0.03	-0.1	0.01	-0.11	-0.08	0.1	0.04
	(0.04)	(0.10)	(0.09)	(0.11)	(0.10)	(0.10)	(0.09)	(0.12)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	0.09	-0.18	-0.03	-0.32 **	-0.11	-0.13	0.1	0.19
	(0.08)	(0.14)	(0.07)	(0.13)	(0.15)	(0.14)	(0.09)	(0.16)
Part-time	0.07	0.05	-0.05	0.02	0.1	0.05	0.03	0.11
	(0.04)	(0.09)	(0.06)	(0.07)	(0.08)	(0.09)	(0.07)	(0.09)
Not working (omitted)								

Appendix Table 8-3 (continued)

Determinants of Access in South Carolina (SCHAP): Impact of Disenrollment

	Probability of hospitalization in the past year (1)	Probability of any visit in the past three months (2)	Probability of emergency room visit in the past three months (3)	Probability of outpatient hospital visit in the past three months (4)	Probability of other visit in the past three months (5)	Probability routine check-up in past year (6)	Probability of unmet need in past year (7)	Probability of dental visit in past year (8)
Variable								
Self-Reported Health Status								
Very Good	0.14 ***	0.08	-0.01	-0.02	0.06	0.04	-0.05	0.09
	(0.04)	(0.11)	(0.06)	(0.08)	(0.10)	(0.10)	(0.07)	(0.10)
Good	0.25 ***	-0.03	0.02	-0.09	-0.04	0	-0.01	0.19
	(0.07)	(0.12)	(0.08)	(0.10)	(0.11)	(0.12)	(0.09)	(0.14)
Fair/Poor	0.24 **	0.02	0.01	-0.1	0.06	-0.09	-0.2	0.01
	(0.11)	(0.18)	(0.14)	(0.16)	(0.15)	(0.16)	(0.14)	(0.14)
Excellent (omitted)								
Physical health interferes with social activities	-0.04	0.31 **	0.01	0.03	0.33 ***	0.22 *	0.08	-0.3 **
	(0.08)	(0.12)	(0.11)	(0.11)	(0.12)	(0.13)	(0.11)	(0.13)
Mental health interferes with social activities	-0.03	-0.24	0	-0.05	-0.26 *	-0.04	-0.17	0.04
	(0.07)	(0.14)	(0.13)	(0.13)	(0.15)	(0.14)	(0.11)	(0.14)
Health limits light activities	-0.01	0.25	-0.75 ***	0.57 **	0.35 **	0.52 **	0.57 **	-0.23
	(0.26)	(0.19)	(0.20)	(0.23)	(0.15)	(0.24)	(0.25)	(0.36)
Continuously enrolled	-0.07	0.21 **	-0.07	0.01	0.19 **	0.1	-0.22 ***	0.18 **
	(0.06)	(0.10)	(0.06)	(0.08)	(0.09)	(0.09)	(0.08)	(0.09)
R-square	0.1719	0.1269	0.0937	0.0981	0.0900	0.0459	0.1064	0.0633
n	223	221	222	221	221	222	221	222
chi-square								

*p<0.10 **p<0.05 ***p<0.01

SOURCE: Medicaid Expansion Demonstration Household Survey.

Appendix Table 8-4

Determinants of Satisfaction in South Carolina (SCHAP): Impact of Disenrollment

	Satisfaction With							
	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Variable								
Intercept	0.34	-0.01	0.6 *	0.18	0.16	0.49 *	0.49 *	0.19
	(0.32)	(0.38)	(0.35)	(0.31)	(0.27)	(0.26)	(0.28)	(0.25)
Age	0	0	-0.01 **	0	0	0	0	0
	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Gender (1=Male)	-0.11	0.16	0.01	0.07	0.1	-0.03	-0.01	0.09
	(0.09)	(0.12)	(0.10)	(0.10)	(0.09)	(0.09)	(0.08)	(0.08)
Race (1=White)	-0.17	-0.35 ***	-0.23 **	-0.06	-0.04	-0.32 ***	-0.16	0.08
	(0.11)	(0.12)	(0.11)	(0.10)	(0.11)	(0.10)	(0.10)	(0.09)
Education (1=High School Graduate or Higher)	-0.18 *	0.04	0	-0.09	-0.26 ***	-0.17 **	-0.17	-0.17
	(0.11)	(0.13)	(0.13)	(0.12)	(0.10)	(0.08)	(0.11)	(0.11)
Poverty Status (1=Above poverty)								
Employment Status								
Full-time	0.04	0.02	-0.15	-0.09	-0.07	-0.14	-0.1	-0.14
	(0.16)	(0.17)	(0.19)	(0.18)	(0.15)	(0.12)	(0.13)	(0.14)
Part-time	0.08	-0.01	0.07	-0.01	0.08	0.11	0.1	0.17 *
	(0.09)	(0.12)	(0.10)	(0.10)	(0.09)	(0.10)	(0.08)	(0.09)
Not working (omitted)								

Appendix Table 8-4 (continued)

Determinants of Satisfaction in South Carolina (SCHAP): Impact of Disenrollment

	Satisfaction With							
Variable	Ability to see doctor of choice (1)	Arrangements for getting care on nights and weekends (2)	Availability of medical information/ advice by telephone (3)	Travel time to a doctor (4)	Waiting time for an appointment (5)	Waiting time in the office (6)	Overall quality of care (7)	Overall cost of care (8)
Self-Reported Health Status								
Very Good	-0.05	-0.12	0.08	-0.03	-0.1	0.14	-0.01	-0.01
	(0.11)	(0.15)	(0.12)	(0.11)	(0.12)	(0.12)	(0.10)	(0.10)
Good	-0.18	-0.35 **	0.08	0.01	-0.05	-0.05	-0.28 **	-0.05
	(0.13)	(0.16)	(0.14)	(0.13)	(0.13)	(0.12)	(0.12)	(0.11)
Fair/Poor	-0.23	-0.14	0.13	0.31 *	0.31 **	-0.06	-0.21	-0.21
Excellent (omitted)								
Physical health interferes with social activities	-0.04	-0.15	-0.29 **	0.04	-0.01	-0.05	-0.24 *	-0.27 **
	(0.14)	(0.19)	(0.13)	(0.14)	(0.15)	(0.14)	(0.13)	(0.13)
Mental health interferes with social activities	-0.09	0.18	0.02	-0.03	-0.04	-0.05	0.09	-0.04
	(0.15)	(0.18)	(0.12)	(0.14)	(0.15)	(0.14)	(0.15)	(0.16)
Health limits light activities	0.69 **	0.63 **	-0.32	-0.19	0.03	0.03	0	0.37
	(0.33)	(0.25)	(0.22)	(0.22)	(0.15)	(0.16)	(0.16)	(0.23)
Continuously Enrolled	-0.01	-0.02	0.29 **	-0.01	0.02	-0.04	0.02	0.41 ***
	(0.11)	(0.13)	(0.11)	(0.11)	(0.11)	(0.10)	(0.10)	(0.09)
R-square	**0.0740**	**0.1921**	**0.1568**	**0.0345**	**0.0942**	**0.0860**		
n	**193**	**92**	**121**	**198**	**172**	**181**		
chi-square								

*p<0.10 **p<0.05 ***p<0.01

SOURCE: Medicaid Expansion Demonstration Household Survey.

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